

SHIP-SURGEON'S  
HANDBOOK

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*A. V. ELDER*



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# THE SHIP - SURGEON'S HANDBOOK

BY

A. VAVASOUR ELDER, M.R.C.S., L.R.C.P.

SURGEON ORINET STEAM NAVIGATION CO.

LATE SURGEON BRITISH INDIA STEAM NAVIGATION CO.



LONDON  
BAILLIÈRE, TINDALL AND COX  
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TO  
DR. W. P. SEED  
*(Of Perth, West Australia)*

THIS BOOK IS DEDICATED AS A MEMENTO OF A  
MOST PLEASANT, SOCIAL AND PROFESSIONAL INTERCOURSE  
DURING A VOYAGE  
TO THE LAND OF THE SOUTHERN CROSS.  
IT IS TO HIS SUGGESTIONS  
THAT THE BOOK OWES ITS ORIGIN,  
AND THE AUTHOR TAKES THIS OPPORTUNITY OF  
EXPRESSING HIS GRATITUDE.



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## PREFACE

THE author's excuse for writing upon what at first sight, appears to be a commonplace subject, is the absence of any literature wholly devoted to the life and work of a ship-surgeon. His book is intended to be a guide only to the uninitiated, and it is hoped that it may save such from the numerous pitfalls to which they may find themselves exposed while engaged in their work. Some of these the author's own experience, and that of many contemporaries, has shown to be of actual daily occurrence. Where the text is somewhat colloquial and verbose, containing in places self-evident facts, it may be explained that it has been made so with a view to providing for nearly every contingency likely to be met with by the novice. In the author's opinion, no class of men undertake their professional duties knowing less of the surroundings in which these are performed, than surgeons going to sea for their first voyage. He begs indulgence for literary style, or, rather, for lack of it, and hopes the book will be accepted in the spirit in which it has been written, as a guide and not a text-book.

LONDON, 1906.



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# THE SHIP-SURGEON'S HANDBOOK

## CHAPTER I CHOICE OF SHIP

FOR a man intending to spend some time at sea, it is better to enter the service of some large mail steamship company, such as the Peninsular and Oriental, Orient Steam Navigation Company, Union-Castle, Royal Mail, Pacific Steam Navigation Company, etc., from the beginning, and stay with such company until he wishes to give up the sea and settle down in practice on shore.

If, however, he only wants to make a trip or two after obtaining his medical qualifications, to see the world or to take a holiday, there are many ships carrying a surgeon for the voyage only, leaving him the option of making a second trip on return to home port, such as the British India Steam Navigation Company, Holt's 'Blue Funnel' Line, and 'China Mutual' steamers, Federal, Houlder, and Shire Lines, etc. Others, again—such as the Aberdeen White Star Line, Lund's Blue Anchor Line, etc.—will carry a surgeon for the outward or homeward passage only, letting him, so to speak, 'work his passage,' giving him no pay, or by deducting

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a sum varying from £10 to £20 from the money he would otherwise pay as a first-class passenger.

The methods of obtaining a surgeoncy are as follows :

1. By personal or written application at the company's offices, with registration thereof in a book kept for the purpose, and waiting until a vacancy occurs. This is often slow and uncertain.

2. Through agents, such as Messrs. Sparks, Treharne, and Densham, 12, Mitre Street, E.C. ; Messrs. Moore and Co., wholesale druggists, 125, Houndsditch, E.C. ; the Cambridge Appointments Society, Trumpington Street, Cambridge, etc.

These appointments are obtained on payment of a fee, which varies according to the monthly salary paid by the ship selected.

Incidentally it may be stated that the pay of surgeons varies from £6 to £14 a month, according to the company.

Salaries at sea are always computed by the completed calendar month, odd days being reckoned at thirty to a month.

Long service carries no increase of pay in the mercantile marine.

3. Through private influence or that of friends in the steamship companies—needless to add, the most satisfactory of all in obtaining a ship.

It is well to bear in mind that the candidate who is free to start at once (and he should take care to impress this fact when applying at the office) will stand a far better chance of obtaining a ship than one who is holding some other appointment at the time, and is only at liberty after a certain date. Of course, in the case of the larger mail companies, which always have a big list of candidates, application may be sent in while

still holding house appointment at a hospital. In these cases the candidate should state clearly when such term of office expires, and take the chance of a speedy appointment. Previous tenure of hospital appointments, although not absolutely essential, is useful in obtaining a surgeoncy in the better class of steamship company. Steamships only 'sign on' surgeons as vacancies occur, and cannot wait until any particular man is at liberty, and as these generally occur at short notice, they are filled, as a rule, by the men ready to sail. It is certainly unwise for an applicant to walk into a steamship office and say he will be free on such and such a date, and wishes to sail in such and such a ship. Applications in this form tend to give an unfavourable impression.

Ships on 'agents' books' cannot be considered as first-class employment, and on inquiry generally prove to be cargo-boats taking a limited number of passengers, good enough for one trip, or as a holiday, but valueless for a term of service. With this class of ship the surgeon, before definitely committing himself, should make full inquiries about her and her trade. The usual form of procedure is for the agent to say: 'We have a ship sailing on or about a certain date to India, or one to China or Australia, and no uniform is required,' giving no details as to name or class until the appointment is settled, or until closely questioned about it, when, perhaps, the name of the owners may be divulged. Under these circumstances, agreement once signed, a man may find himself bound down to an inferior ship and a miserable existence for six months, or even longer, according to the 'ship's articles of agreement,' as letters to the medical journals from time to time disclose. Before affixing his signature to the 'articles,' the surgeon should thoroughly acquaint



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himself with the conditions of service laid down therein, especially in the smaller, tramp type of ship. When crews are signed on, 'the articles' are usually gabbled through at so many words a minute, quite regardless of their intelligibility, and when disputes arise there is no redress, as the articles were read over prior to signing, according to law (*vide* Appendix IX.).

The commission charged by agents is generally about one to three guineas, according to the rate of monthly pay, being £6, £8, or £10.

Strictly speaking, payment of such commission is illegal, coming under the term of 'crimping,' hence fees are always payable in advance.

Surgeons on mail steamers are appointed direct by owners, and very rarely indeed through agents. Here, naturally, personal influence, or a chance call at the office, when an unexpected vacancy occurs, are important factors in obtaining a surgeoncy.

When calling at the head office, the official to inquire for is usually the marine staff superintendent, who will hand the candidate necessary forms to be filled up and returned. These naturally vary as to detail. Undoubtedly one of the best companies to try and join is the Peninsular and Oriental, otherwise familiarly known, all the world over, as the P. and O. It is the only line affording such a variety of runs—India, China, Japan, and Australia—so that at the end of his term of service (formerly two years, now twelve months, with option of further service), a man has seen a good deal of the world. Australia, yachting cruises to the Mediterranean, Near East, and Norwegian Fjords, are included in the Orient Steam Navigation Company's itinerary. The Royal Mail now offers Australia in addition to their old trade routes to South America and the West

Indies. The Union-Castle Line to South Africa requires no detail. The Far East and Far West are reached by the Canadian Pacific Railway Company's steamers. In the Atlantic trade, ships of the Cunard and White Star Lines are said to offer a form of permanent medical employment to a man who likes the sea-life, and yet does not care for the routine of the navy. The larger ships of this class carry two medical officers—a senior and junior—the thing to do being to await promotion from the lower rank. Both the latter companies have a Mediterranean service to the States, carrying emigrants chiefly, and the White Star Line, in addition, maintains an Anglo-Australian service for one class of passenger only. Space forbids other 'lines' being here mentioned, although most of them employing surgeons figure on a list in Appendix VII.

A word of warning may here be given, and that is, do not stick at the sea too long; not that there is any want of practice. A crowded passenger ship will generally afford a large and varied scope of work. But there is a danger of getting into a roving and unsettled state of mind, from which it is very difficult to settle down into a shore practice. The longer a man stays at sea, the harder will it be for him to give it up. Further, go to sea fairly young, see everything possible, and enjoy life before commencing a regular medical career. Later on in a man's life it is difficult to go to sea, even for a voyage, when a practice has to be sold, or left to a *locum tenens*, and family ties bind him to the shore.

## CHAPTER II

### OUTFIT AND UNIFORM

THE initial expense of uniform is mainly dependent on the company one joins, some requiring much lace and trimmings, as well as full dress, undress, and mess uniforms. Others, on the other hand, are very modest : a double-breasted reefer suit, with eight brass buttons, distinctive stripe, and cap and badge meeting all their requirements. Occasionally it is possible to take over one's predecessor's badge, buttons and lace, etc., for a mere trifle, thus saving a considerable sum, as these adornments of uniform are somewhat expensive if bought new. In some companies these are provided gratis, every two or three voyages.

In collecting uniform and outfit together, the point to bear in mind is that the uniform at least, will probably never be actually worn out, and therefore to buy as little as possible, consistent, of course, with the company's regulations as to uniform. On being appointed to a ship, the surgeon will invariably be given a long list of outfit which he is to obtain, certain items of which can readily be dispensed with, and the cost kept down to a reasonable amount. A regulation navy pattern overcoat may seem superfluous, seeing it is not required for use on the bridge, and the price (£4) is somewhat high.



It is, however, well worth obtaining, as during one's sea-service it can be utilized when necessary, as an overcoat or a dressing-gown, and in later years, by substituting plain for uniform buttons, a capital driving and travelling coat, which will last for years, is obtained.

For undress uniform, a medium quality serge is better than the blue-black cloth sometimes provided, as it can also be worn elsewhere after removal of buttons.

The quantity and quality of outfit, apart from uniform, is regulated by the duration of voyage, climate, and the facilities for getting washing done at intermediate ports of call, the latter in a mail steamer being practically impossible, or certainly not to be relied upon.

If appointed to a ship engaged in a tropical voyage, where white material is worn for a considerable part of the run, it is advisable to get a minimum number of suits in England before leaving, making up the necessary quantity in the East, where prices average from 30 per cent. to 60 per cent. less, the fitting being just as good as the original European garment. When ordering from a native tailor, it is customary to let him have a suit as a model to cut the others from, it being unpicked and afterwards stitched up again. Therefore, care should be taken to see that the 'model' suit is a good fitting one.

An example of the difference in price may be of interest. In England, white suits made to measure usually cost from 15s. to 25s. each, although some can be obtained at 10s. In Calcutta, the price varies from 3 to 5 rupees (4s. to 6s. 8d.), according to the material chosen. Of course, nothing looks so nice as a well-cut, close-fitting suit of white drill ; but the European price makes it an item of luxury, as, with the constant washing required, a suit soon loses its shape and smartness.

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As a rule, a white suit lasts two days ; with care, three or four days' wear can be squeezed out of it. Hence, a stock of suits is imperative. When ordering, it is advisable to have extra stiffening put into the collars, as nothing looks so untidy, as a clean white suit all crumpled at the neck an hour after it is put on.

Where white suits are not regulation uniform, khaki-coloured drill can be substituted to advantage, as regards original cost and subsequent washing-bills.

If required, a uniform solar topee, or sun-helmet, is bought at Port Said almost as cheaply as anywhere, prices in England for this, as for all other items of the so-called 'colonial' and 'marine' outfit, being very high.

In the tropics, a topee is really necessary when going on shore or in parts of the ship uncovered by awnings. Care should be taken to see that the nape of the neck is well covered by the overhanging brim. The author is inclined to believe that a large number of cases of severe cephalalgia, heat exhaustion, or sunstroke, are brought about by neglect of this precaution.

While wearing 'whites,' the question of underwear must be considered. The writer advises a light woollen merino vest with sleeves to the elbow, or a navy-pattern flannel 'jumper' vest to slip over the head. The temptation to discard all underwear must be strongly resisted, as the liabilities of catching a chill are very great. With regard to underpants, the coolest and most satisfactory form of this article for extremely hot weather, is a pair of ordinary knitted bathing-drawers, with the centre seam unpicked in front for two inches.

The use of a 'cholera belt' is optional, and although greatly reducing the risk of 'abdominal chill' and its sequelæ, it has the drawback that, once used, it must



be continually worn, day and night. For elderly men its use is, however, almost obligatory.

Too high a price should not be paid for stiff-fronted white shirts, as a large number are required, and washing at most ports, except Chinese, is even more ruinous than at home. A fair price to give for a serviceable white stiff-fronted shirt is from 3s. 6d. to 5s. 6d., having it recuffed and refronted when required. In the author's experience, the life of a 7s. 6d. shirt is no longer than that of one bought at 3s. 6d., and the balance can be expended to advantage in having the latter recuffed as occasion arises.

For ordinary daily wear, the soft-fronted and stiff-cuffed shirt of a cellular type will be found most comfortable, and can be obtained at about 4s. to 4s. 6d.

The use of a single or double collar is optional, although the former is uniform, and looks better when worn with frock-coat and mess-jacket. Plain black silk ties are always worn at sea; they should not exceed one and a half inches in width.

For underwear, light flannel or woollen vests should, for preference, always be worn next to the skin, whether in or out of the tropics, as a safeguard against chills. A chill caught at sea is very difficult to get rid of, and may be attended with serious consequences. In the hot weather, where diaphoresis is very free and renal activity diminished, chills and colds are very stubborn, resisting most forms of treatment, and may persist until terra firma is reached.

During the passage of the vessel from tropical to temperate latitudes extra precautions against 'catching cold' should be taken by those unaccustomed to these changes.

A mosquito-net to fix up over the bunk, will be found

a great boon when lying in tropical ports, ensuring an undisturbed night's rest and absence of the facial disfigurement and discomfort to which some people are so subject when bitten, not to mention the immunity from possible malarial infection. It can be bought at any colonial outfitters, and takes up very little space when not in use.

In getting the outfit together, it should also be borne in mind that 'marine outfitters' are accustomed to give even longer credit than ordinary firms, and put up their prices accordingly, giving, as a rule, 5 per cent. discount for cash settlements. Even with this, in many instances, one is paying a high price, the quality of their goods being in no way superior to that of any firm of ordinary everyday outfitters.

Therefore, it is advisable to order nothing but actual 'external uniform' from the regulation tailor, each steamship company having its own authorized firm or firms, and obtain the other items elsewhere. Credit must, however, be given to the regulation tailors for the rapidity with which orders are executed and delivered on board at short notice. Further, it is only they who can put on braid and lace in the orthodox manner, some companies being very particular on this point.

To prevent theft and laundry losses among a large stock of underwear, it is as well to have an inventory, and check it personally with one's servant occasionally, and also to check washing on its return to the ship. As marine washing is generally done at so much a dozen pieces, everything included, usually 2s. 6d. to 3s. a dozen, and returned as so many dozen, items are not infrequently found wanting or exchanged, generally for the worse.

In Appendix I. will be found a rough specimen list of outfit, with approximate cost of the various articles.

With regard to professional books, opinions and tastes vary. The writer offers the following list :

Monro's, Taylor's, or Osler's ' Manuals of Medicine.'

Whitla's ' Dictionary of Treatment,' or ' Burney Yeo on Treatment.'

Manson's ' Tropical Medicine.'

Rose and Carless's ' Surgery.'

Treves or Allingham's ' Operative Surgery.'

Herman's ' Difficult Labour ' and also ' Diseases of Women.'

Dakin's or Jellet's ' Midwifery.'

Martindale and Westcott's ' Extra Pharmacopœia ' is a handy little book to have by one. Others may be carried according to choice, although one of each group mentioned above should figure on the shelf.

It is a good plan to arrange for some one or other of the weekly medical papers to be forwarded to the various ports of call, as by this means, a man can keep more or less in touch with his profession and colleagues—granted, of course, that he reads them. Professional reading is, as a rule, set aside for the charms of lighter literature when a man once gets away to sea. During the daytime, too, it is almost impossible to do any reading of a serious nature, there being so many interruptions.

A microscope is decidedly a luxury, and very rarely likely to be in much demand ; the necessary reagents and extras, too, make it cumbersome. Specially-prepared cover-slips for blood-films, etc., to be subsequently studied at leisure, might be taken.

If the surgeon be a photographer, he should certainly take his camera, although developing at sea is always subject to difficulties of climate, interruptions at critical moments, etc. Tabloid or powder is the best way of carrying the necessary reagents.



## CHAPTER III

### DRUGS

THE most cursory glance at the scale of drugs required by the Merchant Shipping Act to be put on board all foreign trade ships carrying emigrants, will show it to be in some respects inadequate, and at the same time in others, somewhat superfluous. Among the latter may be instanced *linum contusum*, carried at the rate of 6 pounds per hundred passengers. It is bulky to stow away, and will probably never be used from the day of sailing until arrival home again, after which it is returned to store while the vessel is in port, and shipped again for the following voyage.

*Oleum lini*, too, would appear to be of more use to the chief officer and ship's painter for decorative purposes, than to the surgeon. Carrying the *liquor ferri perchlor. fortior*, as well as the ordinary tincture, seems unnecessary. A large quantity of ether, relatively speaking, is required, for what purpose has not yet been divined by the author. As an anæsthetic it is practically useless for the greater part of a tropical voyage, owing to the high external temperature, and the omission to include a suitable inhaler on the scale. The apparatus officially supplied is composed of a soft patent leather conical mask lined with felt.

Among the more common drugs in general use which

are not officially included may be mentioned tinctures of *nux vomica*, *cinchona*, and *rhubarb* ; the equivalents of the two former—*liq. strychninæ* and *quinine sulphate*—are somewhat difficult to dispense in small doses, especially if the ship is rolling a little.

Bromide of potassium—that sheet-anchor for cerebral and nervous storms—is conspicuous by its absence, its place being taken by the ammonium salt.

Vermifuges are apparently not supposed to be required at sea. The scale contains no simple, safe, and reliable hypnotic, such as paraldehyde. Sulphonal is too slow and uncertain in its action, especially in warm weather ; and chloral, chlorodyne, and opium are not always indicated or desirable, taking into account their subsequent astringent action as well.

Hypodermic tabloids of pilocarpine nitrate ( $\frac{1}{3}$  grain) might be placed on board with advantage ; also some preparation of eserine. In two years, the author has met with three cases of acute glaucoma occurring on the high seas, which were tided over by this means until arrival into port.

Urotropine will be found useful in cases of renal congestion and bladder troubles, and should certainly be carried.

Salol, too, is another drug for which there is great use on board ship for ailments due to chill and damp.

Flavouring agents appear to be confined to the spirits of chloroform and peppermint. Miscible oil of lemon makes a good concentrated preparation of this nature.

Mucilage does not figure on the list, although glycerine, in many instances, can be used instead.

In these days of antitoxins a supply of antidiphtheritic serum is, in the author's opinion, just as important as

vaccine lymph, and should always be carried. No doubt it will soon be officially required.

A urinary test-case is supplied, but no Fehling solution for use with it. The tabloids prepared by Burroughs Wellcome are a most suitable form of this reagent, owing to the instability of the solutions when kept any length of time.

Capsules of amyl nitrite are very desirable in case of emergency.

For cases requiring a short period of anæsthesia, ethyl chloride, with a patent inhaler, is a very compact and portable method of inducing it, the drawbacks to its use being the vomiting, which commonly occurs after its administration, and the cost of the drug and apparatus. It is extremely doubtful whether any firm of shipowners would consider it a necessity and provide it gratis; the cost would, therefore, have to be borne by the surgeon himself. Further, it can also be used as a local anæsthetic by those partial to one of this class.

For disinfecting passenger-spaces, a supply of formalin and a lamp is preferable to the orthodox sulphur fumigation, as it does not injure soft goods or tarnish metallic fittings, and is much simpler to manipulate.

Ordinary finger-bandages are not official, and will be found very handy, saving the trouble of cutting a medium one in two—a matter of considerable difficulty to accomplish neatly.

Printed labels bearing directions for use, for draughts, mixtures, liniments, etc., and also to 'Return the bottle,' with a rack for storing, will be a great convenience if there is much dispensing to be done. Note well to affix poison labels in all cases where indicated, in case of accidents occurring.

At least two invalid feeding-cups and two Doulton



ware hot-water bottles, flannel covered, should be kept in the surgery, although they may be substituted by afternoon tea-pots and whisky-bottles in emergencies. Indiarubber bottles are not to be recommended, as, unless in constant use, they soon become useless, for reasons to be subsequently mentioned. There are a large number of items in the medical equipment of a ship which deteriorate more from want of, than actual use.

It must, however, be admitted that the official scale is, apparently, designed for use with that excellent little work, 'The Ship Captain's Medical Guide,' compiled by Harry Leach, M.R.C.P., revised by William Spooner, M.R.C.S., L.R.C.P., and published by authority of the Board of Trade. Than which, as a technical treatise for a lay reader, no better book has, in the writer's opinion, ever been written. It is placed on board all emigrant ships officially, and will prove a source of interesting and instructive reading to the sea-going practitioner during his first voyage.

In it are described common complaints in nautical terms—for use when dealing with the crew—and many useful hints, about medical matters in general at sea, are given.

From the foregoing and following chapter the reader may derive the idea that ships are sent to sea, woefully ill-found in their medical department, but he must remember that a ship in commission—even a large mail-boat—has neither the space nor, as a rule, the demand for the stock of a general hospital. The above remarks and suggestions are not querulous, but simply the outcome of the author's personal experience during long voyages, some with over 800 souls on board at a time, and passing through many changes of climate and temperature.

They are put forward only as suggestions, and not fixed rules, as he is well aware of the fact that every medical man has his own pet drugs, which he has studied, and with whose employment and results he is familiar, prescribing them in preference to all others of their class in the Pharmacopœia. Surgeons can, and do make the regulation scale suffice for their purposes, although most steamship companies allow, in moderation, what they call surgeon's extras, for use mainly among saloon passengers.

The Board of Trade scale only takes cognizance of members of the crew and steerage passengers or emigrants, in specifying the quantity and quality of the stores which must be carried. It allows nothing but the crude drugs, without embellishments—something after the style of the ordinary private pharmacopœia of a large general hospital on land.

For the use of saloon passengers Morstadt's wafer cachets, to take 5 grains, are very acceptable, and highly appreciated. They can easily be made up with a camel-hair brush moistened in water. Belladonna plaster, too, is a useful luxury, porous plasters being often inquired for by passengers; also chlorate of potash lozenges, court plaster, and Fuller's earth.

Nowadays, with the ever-increasing method of tabloid medication, saloon passengers are becoming fastidious in their medical treatment, and look to receive it, in its most modern refinements.

In Appendices II., III., and IV. will be found the scale of drugs and stores, which must be placed on board all ships coming within the Emigration Acts. Also a list of supplementary stores, etc., which, in the author's experience, have been found useful, and which he has made a practice of applying for.



## CHAPTER IV

### INSTRUMENTS AND APPLIANCES

MOST steamship companies provide all the necessary drugs and instruments; some, however, require the surgeon to provide his own pocket-case. In the P. and O. the surgeon has to supply nearly all the instruments himself, according to a recognised scale. This is an unreasonable demand upon the finances of a young medical man. The usual operating-case costs about £20 new, and may be obtained at the usual dealers, either new or second-hand, preferably the latter, as it is not of much use for a general practice, and is best disposed of again, when the time of service is over.

A portable sterilizer is not included in the Board of Trade scale, and should be supplied to the ship by the owners, on application of the surgeon. It seems strange that the value of the whole surgical armamentarium of a ship, should be practically discounted through the omission to include the one item indispensable to its efficient use—viz., a sterilizer. The idea of using galley utensils for this purpose is hardly pleasant.

Two Spencer Wells pressure forceps are barely sufficient, and the stock should be increased to six at least. They should be of a blunt-nose type. An 8-ounce aural syringe and speculum are useful adjuncts, also a head-mirror (spectacle frame), and one or two

laryngeal mirrors. Elastic bands under these circumstances are apt to perish, and be useless after a time. An antitoxin serum syringe ought to be carried for use with the serum previously advocated.

With regard to dental instruments, if the surgeon already possess a pocket set, with which he is used to working, it is advisable to take them. The results are more satisfactory than if strange instruments, probably antiquated in make and design, are used. The forceps usually supplied are somewhat cumbrous and heavy. A forceps which is distinctly useful is a 'bayonet-pointed upper molar stump.' Temporary stopping, such as gutta-percha, or mastich, with one or two excavators, and a small dental mirror, will be useful and opportune in allaying the pain of carious molars. In the absence of a regular dental chair, when extracting lower molars, the best position to assume is as follows: the patient is seated on an ordinary camp-stool, and the operator stands behind. Placing one foot on the edge of the stool, and firmly fixing his victim's head in the hollow of the operator's chest, the latter has absolute command. Additional security is obtained by the arm of the hand, which is holding the tongue aside, etc., being made to envelop the patient at the neck. Thus the patient is practically powerless. This method is especially useful to those who are ambidexterous, all that is required being a change of hand and foot, when a tooth on the opposite side is to be extracted.

It is, however, wise not to be too eager to do dental work, it being outside medical practice, properly speaking. Some surgeons make a point of refusing to perform even an extraction. Moreover, on the principle of live and let live, only perform an extraction when absolutely necessary for the patient's ease and relief,

as, every tooth drawn at sea is lost to your dental confrères. If tempted to do a little temporary stopping or an extraction, it is just as well to intimate to the patient, that what is being done, is at his own wish and risk to oblige him, and also to decline any responsibility beyond that of ordinary surgical cleanliness. Dental operations, if successful, passengers are apt to look to as their just right and due ; if not, they are the first to abuse a man for interfering in a matter outside his proper sphere of influence. Legally speaking, the M.R.C.S. Eng., is held to cover dental surgery, performed as surgery. The question of dental work has been discussed at length, as more of it falls to the lot of a ship-surgeon than to an ordinary practitioner.

The care of surgical instruments is a matter of considerable importance, as all metal soon gets covered with a coating of rust, owing to the moisture invariably present in the atmosphere at sea, even in the tropics. In the Indian Ocean, especially during the South-West Monsoon, with its accompanying hot wind and rain, everything on board is moist and clammy to the touch, and metallic objects are quickly affected. The best method to adopt, is to thoroughly lubricate everything likely to corrode, at the commencement of the voyage, with vaseline or ung. boracis. Before finally replacing them in their case after use, they should be thoroughly dried and freshly lubricated. By doing this, much trouble and annoyance will be saved in respect of blunt scalpels and needles, rusty forceps, etc. Razors, too, demand the same care. The author's method is to thoroughly dry the blade on a soft towel after use, then to apply to a strop, which is not kept hanging up, collecting particles of grit and coal-dust floating about in the air, but kept in a closed box. Finally the blade



is passed over a piece of chamois leather smeared with a thin coating of vaseline, and returned to its case. The result is that razors are always sharp and in good condition. The above may seem a lengthy and complicated process, but will, in the long-run, prove to be well worth the expenditure of five minutes or so extra, after each shave.

Metal splints, such as a McIntyre's, are very liable to corrode if not carefully lubricated from time to time.

Splints are provided in great variety, but one for which there is some call—viz., a grooved ham-splint—is conspicuous by its absence. Of course, the number of splints is legion, and it is not so much a case of what splint could be done with, as one which cannot be done without. *Tot homines quot sententiæ*. A long Liston's splint might figure on the scale, but could, however, always be improvised by the ship's carpenter at short notice. In splints, as in other things at sea, necessity is the mother of invention. Extra broad webbing straps should be ordered, as those officially supplied with the splints are absolutely useless, being of  $\frac{1}{4}$  or  $\frac{1}{2}$  inch tape, with no spring or elasticity.

A casual glance at the other items of the medical stores once or twice during the voyage will not be wasted time, in case any should show signs of deterioration. Indiarubber is an article which is very much affected by sea air; stethoscope tubing will want renewing every three or four months. Higginson's enema syringes should be occasionally tested, as in ships, where, on return to home port, the surgery is cleared out and replenished again before sailing, the unused and unsoiled portion of the old stock finds its way back again on board trip after trip, until it is finally condemned on being tried and found wanting. The author

on one occasion, while attempting to give a rectal injection of bromide, found the majority of the fluid in the bunk. It was an apparently new and unused syringe, but, owing to the temperature of the tropics, etc., the rubber had 'perished,' allowing the fluid to escape.

Catheters, too, should be frequently tested for flexibility and absence of cracks in their composition, the results of attempting to pass a catheter, with jagged projections of gutta-percha, being almost too horrible to contemplate. Vaseline smeared on to rubber and gutta-percha instruments doubles their length of life.

The plungers of hypodermic syringes require looking after occasionally, as the packing is apt to contract in the course of time. The most satisfactory form of hypodermic syringe is the 'all-glass' one made by various firms. After use, care should be taken to thoroughly dry both plunger and barrel with a fine silk handkerchief, so as not to destroy the 'grinding,' before replacing it. If this is not done, capillary attraction will cause the two to stick together, requiring much time, patience, and care to liberate them. Filling the syringe with absolute alcohol and allowing the parts to dry separately, is an alternative method, and probably better. Should they have stuck together, the best way to separate them is by immersing the whole in water at about 115° F., and gently attempt to rotate the plunger, finally withdrawing it. It is injurious to test the vacuum of an all-glass syringe too often or too much, as the plunger may slip back sharply and crack the barrel.

Before signing for, or accepting delivery of a ship's medical equipment, the surgeon should make a practice of thoroughly overhauling and testing it, paying special attention to the edge of scalpels, scissors, and needles ;

the quality of suture-silk and gut ligatures, the bite of Spencer Well's forceps, caustic holders, etc., and especially the items previously discussed.

One word about thermometers. Have one or two spare ones, and ascertain whether their readings are reliable. Nowadays, most of the travelling public carry their own thermometers, and will always attribute any discrepancy between records to the ship's instrument. An incident occurred to the author showing the importance of this matter quite recently.

A passenger, recently discharged from a consumptive sanatorium as cured, complained of feeling feverish and unwell, and asked if he might take his temperature in the surgeon's cabin, with the latter's instrument. This was done, and a record of  $98.6^{\circ}$  F. obtained, the patient leaving the cabin seemingly much relieved. About fourteen days later, an urgent summons was sent to see another passenger with an attack of malaria and a temperature of  $106^{\circ}$  F. On answering the call and taking the temperature with his own instrument, the author obtained a record of  $103^{\circ}$ . Having given directions as to treatment, he returned to his own room. Presently another call was made, by the patient's friends this time, saying the temperature was still up to  $106^{\circ}$ , and they considered he should be packed in ice, etc. The author, while perfectly satisfied with his own record, to pacify the friends, went back to the patient's cabin and suggested comparing instruments. The result was a difference of  $1.8^{\circ}$  to  $3^{\circ}$  F. at various ranges of temperature. On advising the friends to put the thermometer, which was of cheap German make, out of the port-hole before further alarm was caused, they demurred, saying it belonged to the other occupant of the cabin—to wit, the ex-consumptive. Now, the



latter had been conspicuous by his absence on deck and in the saloon for some days previously, having stayed below in his bunk, not caring to call upon the author again. The change of appearance from abject misery to glorious happiness which came over this patient when the accident was related to him, impressed all who beheld it most deeply.

This incident has been related at length owing to the object-lesson it conveyed to the writer, and, it is hoped, will convey to his readers—*i.e.*, to devote a little time in thoroughly overhauling and testing instruments, etc., before going to sea with them. It would be idle to conjecture what the fate of the ex-consumptive patient might have been but for this startling denouement. In a moment of despair, caused by the apparent recrudescence of his disease, he might have jumped overboard or attempted some other form of suicide. Incidentally, this is an argument against the pernicious practice of allowing and encouraging phthisical patients to take their own temperatures. If it does nothing else, it makes them feel and fear the slightest ache or pain, no matter where situated, becoming morbidly introspective. This, however, is but a digression from the subject under consideration.

The author cannot impress the fact sufficiently that all time and trouble expended in this examination, will amply repay the surgeon by the knowledge that all his instruments and appliances are in good condition and ready for any emergency. Most surgical work at sea, major and minor, is generally of an emergency nature, and as ships are fitted out by contract at so much per hundred passengers, it is naturally to the contractor's interest to put as little new material on board each time as is consistent with official requirements.

The official ligature and suture materials—to wit, one length of silkworm gut and a tablet of silk containing four sizes—are barely sufficient. They should be supplemented by sealed tubes, in which are put up gut ligatures, threaded needles of horsehair, and suture gut. Such tubes keep almost indefinitely, and are ready for instant use. Anyone who has tried sterilizing a needle and silk in a test-tube, for an emergency, will realize the advantage of prepared sutures and ligatures.

Drainage-tubing also could be improved upon: that officially carried consists of a one-foot length, No. 10 gauge, kept in a glass cylinder. In case of need, the receptacle, with the bottom removed, would probably be of more use than the article itself. For drainage purposes, the author uses wicks made of cyanide gauze, rolled up in Christy tissue.

Before an emigrant ship can clear from her port of departure, her medical stores, etc., have to be surveyed and passed by an inspecting medical officer, acting under Government authority. This officer has the power to prevent 'clearance papers' being issued if everything does not conform to scheduled requirements. In Appendices III. and IV. is the official list of instruments and additional ones; in Appendix V. a few hints on extemporized appliances are given, more as a guide than a fixed method of procedure in similar instances.



## CHAPTER V

### STATUS AND DUTIES ON BOARD

To obviate unnecessary friction in the exercise of his profession on board ship, the surgeon should always bear in mind that there is no class of men, so jealous of their calling, as those 'who go down to the sea in ships.' Each has his allotted place in the daily routine, and strongly resents the interference of others, especially landsmen. When, therefore, it is necessary for medical reasons to alter the existing order of things, it should be done through the 'heads' of the various departments—that is, 'the deck' sailors, etc., through the chief officer, engine-room through the second engineer, and the purser for stewards, cooks, and all the odd men carried in large ships for the service of passengers. The usual form of procedure is either to interview the 'heads' personally, or, better still, to send, through the medium of the doctor's servant, a short, courteous note stating what is required. By adhering strictly to this rule, the surgeon will find everything running smoothly, whereas, if he gives orders independently, it tends to weaken discipline, and may give unintentional offence to others in authority. Always, however, remembering that as surgeon, he is head of the medical department, and as such, his word is law and decision final. Moreover, he is also an officer of the ship, entitled to just as much

deference and respect from subordinates, as any junior officer of the executive department.

One of the first lessons which have to be learnt by those going to sea is what, in vulgar parlance, is commonly known as looking after Number One. Not to be aggressive, but simply refuse to be put upon or bounced out of one's just right and due.

In cases of doubt, the commander should always be referred to, he or his immediate deputy being the only person on board to whom the surgeon is directly responsible. Should the commander not give the satisfaction required—and, this is very important, when the surgeon is quite certain that his line of action is clear and correct—he must be prepared to support it, by statement in writing to the commander, declining all further responsibility in the matter unless he is allowed to carry out his duties with a free hand. Generally speaking, such a procedure will never be required, as most captains are quite willing to allow the surgeon to perform his own duty unrestricted, and undertake its concurrent responsibility. Now and again a commander will be met with who, in his virtually omnipotent position on board, may be rather apt to try and over-ride the surgeon. In these unfortunate and at the same time rare cases, the above-mentioned course is the only one to be followed pending the ship's arrival into port, when the matter must be reported to the owners, agents, shipping-master, or British Consul, according to whether it is a home or foreign port. The onus of interfering in a technical subject, of which he probably only knows the rudiments, acquired while in sailing ships, will deter most commanders from extreme measures. One or two illustrative instances may be of interest.

A sailor had been laid up for acute diarrhœa and colic. After two days the chief officer came along to the surgeon saying the man was fit for duty, and he should put him back on watch. The latter's reply was that he was the right person to decide when the sailor was fit for duty, and that if he were 'turned to,' the responsibility rested with the chief officer. As a result, the man remained in his bunk till recovered, and nothing more was said in the matter.

An intending steerage passenger was rejected by the author on examination before embarking. The case was one of advanced locomotor ataxia, with incompetence of sphincters, therefore likely to cause annoyance to others on board. In this case, the agents demurred, urging acceptance on the grounds of outside competition and loss of passage money. The former, however, remained firm, giving a certificate to show why passage was refused, which was accepted, and the ship proceeded to sea. Subsequently the author learnt that, fourteen days later, the patient had died. In this type of case, with a large number of people confined in a restricted space, the community must always be considered at the expense of the individual.

Other instances might be given *ad nauseam*. The surgeon's own personal experience will soon teach him what line of action to adopt. The commander will invariably be only too eager to give the surgeon the benefit of his official support, for the good of the ship.

Another matter which affects the surgeon most intimately, is his professional position and dignity. He should exercise the same check over his actions and demeanour at sea as he would on land, and never lose sight of the fact that, in spite of the dual rôle he fills



on board—surgeon and sailor—the medical side takes precedence. Unfortunately, rightly or wrongly, the general public, as a rule, and also the medical profession, have little faith or confidence in the sea-going practitioner. If he be a young man, then he can have had no experience, coming fresh from the medical schools. If he be advanced in years, his presence on board is due either to debility, drink, or to a professional or domestic débâcle. On this subject nothing further need be said beyond the fact that a surgeon on board will always be treated according to his own estimation of himself.

There have been, and there are, men who disgrace themselves and their profession wherever they may be, only at sea, unfortunately, everything appears magnified and worse than it really is. It lies entirely with the members of the profession themselves, by their conduct and mode of life, to uphold the dignity of their calling, and exact the respect due to it, just as much at sea as on land. The author is bound to admit that among a certain class of ship-surgeons, there appears to be wanting a sense of duty, the whole appointment being looked upon as a means of enjoying one's self and seeing the world at somebody else's expense, professional duties being the last thing ever thought of. Some men make a point of being the first ashore and last on board when the ship is in foreign ports, whereas, that is just the time when their services are likely to be required, in case of accidents while working cargo. Of course, it is not urged that the surgeon should stand by the ship absolutely everywhere, but only as a matter of principle to be where his presence is most likely to be required, thus cancelling the ready cry that the ship's doctor is like the proverbial policeman—never there when wanted. Here it must be mentioned that before leaving the ship,

the surgeon must apply to the commander or officer in command for permission to do so.

Men on being appointed to a ship, should determine to do their work just as efficiently and energetically as if it were a hospital appointment, and then there would not be so much jibing and jeering at the ship-surgeon's expense. The prevailing idea among medical students appears to be that, as soon as a man is qualified, and has held house appointments or is broken in health, he should go to sea for a holiday and rest cure, incidentally doing whatever medical work falls across his path. This may be so in the smaller and intermediate type of ship, but in the crowded 'liner' the position is one of great responsibility, and any slackness or dereliction of duty may involve the owners and passengers on board in considerable trouble and expense. Therefore, to reiterate, let ship-surgeons conscientiously do what they are paid to do, thus upholding the dignity of the profession as well as their own.

It must also be borne in mind that, for the time being, the surgeon is a seaman as well, coming within the jurisdiction of the Merchant Shipping Act in all its laws. He signs 'on and off the articles' just like any ordinary seaman, and at the end of each voyage is granted a certificate of discharge. Here it may be stated that, in the absence of any special agreement with the company, as soon as a surgeon has signed off the articles, he is free to go elsewhere, and is not obliged to make another voyage. The owners, too, are not compelled to employ a surgeon subsequent to this event, and need give no reason for their action. End of the voyage in England terminates all agreements under the Merchant Shipping Act.

Sailors as a class of men are some of Nature's gentle-



men, and the exhibition of a little tact and good feeling on the part of the surgeon, will lead to a very pleasant time at sea. It will also do away with the petty little squabbles, so easily brought about, and so distressingly uncomfortable for all concerned when they do occur, between people restricted to the narrow confines of even a large mail-steamer. There is nothing so unpleasant as to be at loggerheads with shipmates ; one cannot go a step beyond the cabin without running up against them.

Regarding the duties of a ship's surgeon. To most minds, lay and medical, the work of the doctor on board is light and easy, being all night in his bunk, and protected from the vagaries of the elements by having no watch to keep. His public performances consist mainly, of appearing at the gangway when the ship enters port, to receive the local health authorities and obtain free pratique for his ship ; of a daily attendance in the surgery at stated hours, to dole out measures of ' black draught ' or other forms of opening medicine, presiding at the foot of a table in the saloon, and then his day's work is done. No thought is ever given by the public of his responsibilities, both medical and moral, in dealing with an epidemic disease which may perhaps attack the whole population on board. Of his anxiety in a case of enteric fever, where careful nursing is almost the whole essence of treatment, and which is practically unobtainable except under most favourable circumstances, when a trained nurse or two, who happen to be among the passengers, may volunteer their services. His searchings of heart and mind in cases of probable malingering, knowing full well that, if he makes a mistake, his reputation and prestige are gone, or the decision as to whether a man is fit for duty

or not. All these are unknown and unseen, consequently often unappreciated.

He is in a position of splendid isolation, having nobody on board in sympathy with him or his work. No one with whom he can discuss his cases, and otherwise 'talk shop,' unless a brother of the cloth happens to figure on the passenger list. Those who have not experienced it will hardly realize what 'an oasis in the desert'—to use a somewhat Hibernian simile—it is, to find a brother ship on board, as well as a feeling of assistance at hand in the possible time of necessity. A ship-surgeon lives on possibilities, the whole alphabet of medicine, from A to Z, is within his sphere.

In addition to his ordinary professional duties are found some cases of a quasi-medical nature, in which the surgeon is called upon to arbitrate and finally decide: for instance, whether a lazy or slightly seasick passenger is to have his breakfast or other meals served in bed or in otherwise prohibited places, such as the deck, etc.; the right stage at which a bibulous person's free access to liquor must be stopped or restricted, and the means of doing it. Another matter which is relegated to him for decision is that of extra or altered diet. In all ships carrying more than one class of passenger, individuals demanding, to say nothing of requiring, extras of diet will invariably be found amongst the lower classes—that is, second saloon and steerage, in contradistinction to first saloon. They seem to think that they are entitled to whatever extras they can get by just fussing round and asking for them. They know these to be on board, and that others are receiving them, but they are always happily oblivious of the fact that first saloon passengers have paid double or treble for their passage. The majority of offenders in these

cases are either 'first voyagers,' who wish to hide the fact, or those who, formerly travelling saloon, have, for financial reasons, been obliged to travel second and find the difference a bitter pill to swallow. A case in point may serve to illustrate this matter of extra diet. One of a family of five strong, healthy-looking Jewesses fainted in a crowd on the steerage deck, three days out from London. On coming to, she asserted the fainting to be due entirely to lack of food, as, owing to her religion, she had not been able to eat the ordinary fare. Foolishly, however, she added that a relative and co-religionist travelling in another of the company's ships, had been served second-class diet on the commander's orders. When it was pointed out to her that, if she were in the first saloon, her religious scruples would still exist, she said no more, and at the end of the voyage—six weeks—she and all her family participated in the general look of well-being common to the majority. These and similar cases require gentle but firm handling at the outset, as if one passenger succeeds in obtaining some slight delicacy, the rest will soon be clamouring for the same privileges. Separating the wheat from the chaff is not always easy when the company's reputation for the comfort and welfare of its passengers and the additional cost of extras have to be considered. While on this subject it must be mentioned that steerage passengers and members of the crew are entitled to alcoholic liquor gratis as medical comforts, when officially ordered by the surgeon, all others being called to pay for it, if ordered. In an emergency, the surgeon may sign a card for it, which is subsequently handed to the passenger by the bar-keeper for endorsement or in exchange for an ordinary wine-card signed for an equivalent amount.



The internal ventilation of the ship, although, properly speaking, within the surgeon's sphere of influence, is controlled from the bridge by the officer on watch, according to conditions of the weather. The system of ventilation which generally obtains in ships carrying passengers on main and lower decks, consists of a series of downtakes and uptakes, fitted with movable cowls, which can be trimmed front or back to the wind. Those at the forward end of the ship are made to act as downtakes, the progress of the vessel causing air to be forced down and circulate throughout the space below, escaping by means of the uptakes. Another system consists of T-shaped ventilators, the transverse limb being open at both ends, the forward one being the larger. As the ship moves, a current of air passes through the transverse limb, which is kept parallel to the wind, causing a suction uptake current in the vertical limb. As an additional measure, in the hot weather, windsails are rigged up and kept trimmed to windward.

The opening of lower-deck ports is also controlled from the bridge. Where a large number are carried on this deck, and conditions of weather permit, the surgeon might suggest the advisability of opening them if they have been forgotten by the powers that be. He must, however, not insist upon this being done, as it is a proceeding which may endanger the safety of the ship.

Another matter which the author puts forward as a suggestion to ship-surgeons is the use of the night-chamber in passengers cabins. It cannot be healthy, especially in the hot weather, for human beings to sleep in a confined space, with their voided urine practically within a few feet of them. Moreover, the receptacles in which these are stored soon get offensive if not kept



scrupulously clean. The habit of paying a final visit to the lavatory before retiring ought not to be difficult to acquire. All the ship's company have to do it, their cabins or rooms never being provided with these accessories.

The quarters of the crew should receive the surgeon's unofficial supervision as to air, light, and ventilation. It is useless to do it officially, as naturally everything will be prepared in readiness for inspection. When going the regular daily round of inspection with the commander, chief officer, etc., it is good practice to occasionally pull out a waste-tank or night-chamber here and there at random, to see that they are kept thoroughly sweet and clean by the cabin steward. Lavatories and urinal waste-pipes should be flushed down twice a week or more with hot fresh water, owing to the extra precipitation of urinary constituents, caused by the sea-water used as sanitary flush. It is futile to try and kill an ammoniacal smell with that of a disinfectant without treating the cause. The hot water is an excellent solvent for such deposit, which consists mostly of urates.

All these little items, and others too numerous to mention, constituting in some instances really more worry than work, tend to show that the surgeon's post in a large ship is by no means the gilt-edged bed of ease most people imagine it to be. However, as a training in self-reliance, decisiveness of action, tact, and good management, it is equalled by few and surpassed by none of the earlier stages of a medical career. A year or two at sea in a large mail-boat before settling down, is by no means waste of time, and will never be a source of regret to the medical man who launches into professional life in this fashion.

## CHAPTER VI

### PASSENGERS

It has been said of passengers that they bring themselves, their baggage, human and inanimate, and everything else on board but their brains, leaving them in some secluded spot for future use. This will, fortunately or otherwise, according to the surgeon's individual sense of humour, often turn out to be the case, as past and present generations of ship-surgeons could easily corroborate with examples too numerous to mention. To many, as soon as they set foot on board ship, the life there seems to entail, for some inscrutable reason, a complete loss of *savoir faire*. An old passenger-ship captain once truly remarked, 'Passengers when ashore are human beings, men and women, but at sea they are a flock of silly sheep,' only he added a qualifying adjective anything but flattering. One or two not uncommon incidents are given below. A knock at the cabin door, and a steward enters. 'Lord ——'s compliments, and he wants this prescription made up at once.' The doctor's compliments are returned with a message that, although there is a surgery on board, no dispensing chemist is kept. Lord —— comes round to the cabin and apologizes, and the prescription is dispensed. Passengers are not infrequently under the delusion that the ship's surgery is a chemist's shop as

well, where they can get medicines made up gratis at any hour of the day or night. In fact, some purposely refrain from obtaining a stock of their medicines made up on shore, and within ten minutes or so after embarking will call upon the surgeon with an empty bottle in one hand and a prescription in the other. On being politely refused, they invariably get indignant ; are quite willing to pay for it, and will report the matter to the commander or head office. The incongruousness of asking one practitioner to dispense another's prescription never seems to strike them. The author, as a rule in these cases, makes up enough medicine to last until the next port is reached, letting the patient, however, clearly understand it is only as a matter of courtesy and not duty. Further, passengers seem to think that the latest therapeutic agent ought to be carried.

Another instance. Time, midnight, doctor turned in for the night. Knock at the door, which wakes him up. 'Yes, come in.' Enter a passenger attired in pyjamas, who has suddenly remembered that he has had no action of the bowels for the last two days, and thinks he would like a pill, or 'something of that sort, you know,' to take that night. The reply is better left for the reader's imagination to supply.

A source of worry, at times, to the surgeon is the invalid who has been sent for the voyage by his family doctor, loaded up with proprietary preparations and all sorts of advice as to what to do and what not to do. This is probably given by a man who has never been to sea in his life, except, perhaps, for a Channel crossing or two. In due course the patient visits the doctor's cabin and tells his tale of woe, occasionally even before the ship has started. On certain lines of treatment being advised, he or she—the ladies are the worst—



demurs, saying, 'Oh, no ; Dr. — says do this and that, or take this and that.' These cases are rather difficult to manage successfully, because the surgeon does not wish to be iconoclastic as far as the shore practitioner is concerned, yet is anxious to do what he considers best for the patient under the circumstances. Tact and gentle persuasion is the course to adopt, and generally succeeds. Failing that, the only thing remaining is to refuse to undertake the case, as, what with the home practitioner's medicine and that which is given on board, provided it be taken, and not put through the porthole, disaster is almost certain to ensue, and lead to unpleasant relations. The author considers these to be more the result of ignorance of local conditions of life at sea, on the part of the family practitioner, than any slight of the ship-surgeon's professional ability, although some cases do point very strongly towards the latter view.

Much trouble to the ship's surgeon and his patients would be saved if medical men, sending them to sea, would communicate with him first, either personally, where feasible, or by letter, or, as an alternative, instruct them to place themselves unreservedly in the hands of the surgeon on board. The latter would naturally do his best for all concerned. With regard to personal interviews, these can only be held when convenient to both parties, as a ship's surgeon can hardly be expected, should he live far away, to curtail his short holiday, gratis, at all events. The author, on one occasion, travelled a distance of twenty miles to meet a family practitioner in consultation over a case which was to sail on the next voyage. He naturally expected to receive his expenses, if not a consultation fee, but, to his surprise, was informed that his services were



demanding gratis, as he was in the company's employ, although not actually at sea. It is quite absurd for the medical man practising in England to say what his patient must do when he arrives at the Equator, unless the former knows by previous experience the conditions of life which obtain out there.

Having received a letter about a passenger-patient, the question arises as to whether the surgeon should immediately make himself known to his patient, or wait for the latter to call or send at his own convenience. The intrusion of the doctor until sent for is much resented by some, while others, having been written about to some official of the ship, at once imagine that they are therefore *personæ gratae* on board. They expect moreover, to be singled out from the general crowd of other passengers, taking umbrage if this is not done.

Having been subjected to two or three snubs on this point, the author's practice is to wait for his patient to make the first move, unless specially asked not to do so by the shore practitioner. He strongly recommends the adoption of this plan, as it prevents any possibility of receiving a gratuitous insult when not in the position to retaliate, and it also does away with the idea that he may be hunting for fees. Any little misunderstanding which may arise from this course can always be rectified later, in many cases to advantage. A compromise might be effected by casually approaching the patient on deck, and in conversation suggesting a subsequent professional visit. As, however, human nature varies so much, it is quite impossible to lay down fixed laws for the treatment thereof, and the above remarks are the outcome of personal experience.

It is policy for the surgeon to be on friendly terms with all the passengers, or none at all, otherwise, when

the inevitable formation of cliques takes place, he will, if intimate with a selected few, possibly find himself at variance with the others—a state of affairs very much to be deplored, and which should not be allowed to arise, all being equals as far as the surgeon is concerned, and entitled to the same amount of care and attention, whether dukes or pork-packers. This may seem a somewhat sweeping statement, but will be found correct in practice. As it is impossible to please everybody, especially at sea, by pleasing none it is possible to obtain at least a unanimity of displeasure, or certainly impartiality, amongst the passengers. Further, not infrequently passengers are condescending and willing enough to talk to ship's officers while actually on board, yet will totally ignore them should they happen to meet ashore. Passengers, too, like to keep in with the surgeon in case of need. Yet, again, one of the first principles of a sailor is to know his own ship and stick to it. A surgeon should never, as a rule, put passengers before his shipmates; the former leave at the end of the trip, the latter live with him all the time. There is no man so cordially disliked by his shipmates as he who is termed a 'great passengers' man.'

Whether the surgeon should take a prominent part in passengers' amusements and recreation, acting as a sort of master of ceremonies, or keep to himself and his shipmates, the author is not going to state definitely. Some steamship owners expect surgeons to exercise their social as well as medical faculties; others do not, relegating such matters to the purser, who is the passengers' official. On this subject the author advises readers to act according to the exigencies of their service and their own individual inclinations; the note of warning being avoidance of cliques.

Another matter in relation to passengers, which is of greatest importance to the ship's surgeon, not only for his present, but also future, career, is that of 'drinking.' On all passenger ships will be found men ready and eager to 'stand drinks' to officers at all hours of the day or night; for what purpose is not evident. Some seem to look upon it as an act of charity; others like to be able to drink in the doctor's or officers' cabins after the bars are shut. To drink with one and not another causes unpleasantness; to drink with all who offer, will assuredly bring about physical as well as professional wreck. Moreover, the surgeon is nominally on duty day and night, and it cannot be pleasant for passengers, ladies especially, to be attended by a doctor, who is in a muddled state, or about whose person the odour of the last 'peg' still clings.

If a man likes his whisky and soda at meals or his 'night-cap,' there is no objection to his having them, the latter in the privacy of his cabin before turning in for the night. The point to avoid is drinking too much in the smoke-room. In most companies, officers are strictly prohibited from frequenting this place, likewise playing cards with passengers. Although with the surgeon the rule may not be strictly enforced, yet it is wiser for him to obey it more or less, particularly with regard to cards, in the event of any unpleasantness occurring.

In the author's opinion no man is better for alcohol, especially so in the tropics, where it is justly termed the white man's curse, or worse for abstinence; and although holding no brief for the Rechabites, but considering that the opportunities and temptations for excessive drinking are even greater at sea than on land, it is better to avoid alcohol altogether. He makes it a rule of



abstaining from the time of leaving the home port until arrival at the foreign terminal port, drinking while there, or at intermediate ports, if on shore, according to his fancy, becoming a total abstainer again during the run home, thus saving his physical, professional, and financial constitutions. Large wine accounts are always a source of regret to the impecunious sailor, when reviewed in cold blood on the pay-sheet at the termination of the voyage. It is then the little bill comes home in a very forcible manner. Moreover, the little 'gin-and-bitters before meals' coteries so common on board, are fraught with danger. They would be perfectly safe if limited to one glass only ; but invariably there are others, and an insidious habit has been acquired before one is aware of it.

Social custom is undoubtedly a very great factor in the upkeep and propagation of the habit of drinking alcoholic liquor, and until the community in general realize that it is quite possible to be on friendly terms with a man without necessarily drinking with him, very little good can be done by those trying to rid civilization of one of its greatest curses. More than one life wasted through alcoholic excess, can be directly attributed to this pernicious practice. Legislation can neither make nor keep a nation sober ; it is with the nation itself that the crux of the whole question lies.

Whether the foregoing is the correct course to pursue is again left to the reader to decide, although the author is quite satisfied to abide by his conviction. Too many lives of medical men, both afloat and ashore, have been, are being, and, unfortunately, no doubt will be, lost on the rocks of intemperance.

Yet another hint. Never discuss the ship, her officers,



or passengers with other passengers, as stories have a nasty knack of returning home to roost, having grown largely in their wanderings, and causing unpleasantness thereby. There is no place in the world, not even the close of a cathedral town excepted, so well adapted to the procreation and propagation of scandal as a ship, especially so if she be full of passengers with nothing to do all day but eat, drink, sleep, and talk. On attempting to trace the source of a scandal which is becoming somewhat involved, it will always be found to have originated in a passenger who left the ship at a previous port of call, and consequently cannot be called to account for it.

To prevent any misapprehension, the author wishes to state distinctly that the foregoing, or any subsequent remarks, are not made in a spirit of cynicism or pessimism, but solely as illustrations of the peculiar psychological changes some natures undergo, once they set foot on board ship. Any old traveller will easily substantiate all the above, and could probably add to it. On the other hand, it is only fair to say that some of the best and closest friends the writer has been privileged to possess, have been acquired while at sea.

It is, indeed, a revelation to see how a few weeks of ship life will bring out everything, both good and evil, but, unfortunately, more of the latter, in the character of man and also woman; the sea, after all, being a fitting post-graduate college at which to study what is all-important to the man of medicine—human nature, its sulci and convolutions.

## CHAPTER VII

### FEES AT SEA

As the position of the surgeon is somewhat unsatisfactory in the matter of receiving fees, the author hopes the following remarks may make the case clear.

Most steamship companies prohibit the surgeon demanding fees from passengers, either by a clause in the agreement signed by him when joining the marine staff, or, in the absence of any agreement apart from the ordinary ship's articles, by a company's bye-law to that effect. They all permit him, however, to accept whatever is offered, from a gin-and-bitters to half a guinea. In some companies there is a definite scale of fees laid down, which the surgeon is allowed to demand and retain as compensation for the small monthly wage paid by these firms to their medical officers. This system of a definite fee for medical attendance seems to be the most satisfactory one for all concerned. It saves the ship's drugs and surgeon's time from unreasonable demands, giving the patient some idea as to what his illness will cost. Further, the latter appreciates what he has to pay for, more than if receiving it gratis. There is no doubt that many passengers would never see the surgeon professionally from one end of the voyage to the other, were they obliged to pay a fee. Some appear to consult him more with the idea of putting time in,

especially out of hours, rather than on account of any bodily ailment. Incidentally, it is well to fix and publicly notify by a notice, affixed to the surgery door or official notice-board, the hours at which the surgeon will see passengers professionally ; he should refuse to see them apart from these times, except, of course, in case of emergency. He should also refrain from discussing their ailments with them on deck or other public place, unless circumstances indicate. Some passengers are very eager to discuss themselves, and their woes when and wherever they chance to meet the surgeon.

Many passengers—'first voyagers' in particular—are often in doubt whether to offer any remuneration, either in sterling or in kind, to the surgeon, for services rendered, being afraid of giving offence. It is rather unpleasant for the latter to be asked point-blank what his fee is, knowing it is *contra vires* for him to state one, and probably against his inclination to refuse one. A momentous silence invariably takes place, and both parties feel awkward and stupid. Some companies have added to the trouble by advertising their ships as 'ss. — ; cow, surgeon, and stewardess carried.' On the subject of the cow little need be said. She is usually kept in a pen little larger than herself, with scarcely room to turn. As she is carried usually for about six months, then slaughtered and eaten by the crew, toward the end of that time the quality, as well as the quantity of her milk, leave much to be desired. Cow-carrying ships are therefore somewhat of a delusion as far as invalids are concerned ; moreover, the commander generally has a first option on the milk.

To return to the matter under consideration. The author makes a practice of keeping a record of all visits in a Burroughs Wellcome visiting list, so that when a



patient voluntarily offers to pay a fee, the case can be looked up and amount chargeable in an average shore practice mentioned, taking care, however, not to demand it. Even this at times leads to comic incidents, the patient, on finding there is nothing to pay, bolts out of the cabin, as if his life depended upon it.

With 'old voyagers,' who have received attention and intend to remunerate the surgeon, it is usual for them to enclose the amount, whatever it may be, in an envelope, and send it round to his cabin, the day they leave the ship.

Fees for the treatment of venereal disease should always be demanded, and in advance, for obvious reasons. No company would take exception to this. If the patient refuse, a slight reference to the undesirability of entering the case in the medical log-book is a gentle and really permissible form of blackmail, which, as a rule, succeeds. In one case a saloon passenger consulted the author, two days out from London, for an acute attack of gonorrhœa. On the question of a fee being raised, he demurred, finally consenting, subject to a receipt for the amount being given. After some consideration, the author being very much taken aback at such an unusual request, one was given, worded as follows :

‘Received from Mr. X. Y. Z. the sum of .....  
for private treatment of venereal disease acquired  
prior to embarking.’

The patient tore up the receipt immediately and left the cabin without a word, clearly indicating his intention of creating trouble for the author had a simple acknowledgement been given. Had the receipt been wanted for an insurance claim, then the fraudulent claim was foiled.

It is a delicate matter dealing with cases of illness acquired before joining the ship, such as chronic sinuses,



bladders, prostates, stiff joints. Some of these come on board with a great flourish of trumpets about engaging the ship's surgeon privately, and after about two or three weeks' constant attention will have the audacity to offer him a quarter of the fee, sometimes even less, that they would have been liable for on shore. On one occasion, after washing out a septic bladder three times daily for two weeks, the author was graciously offered the munificent sum of one guinea. Needless to say that this occurred in the spring-time of his marine experience. With these cases, it is absurd affecting any mock modesty over the question of fee. Therefore, in a septic or dirty case, where possible, the surgeon should come to some definite arrangement before commencing treatment, otherwise he may be put to much trouble and inconvenience without even a 'thank you' at the end of the voyage. Space forbids examples being given; readers will soon be able to supply them for themselves, shortly after going to sea.

It is quite right to charge a fee when a prescription is required to be taken away from the ship, although few think of paying for it unless desired to do so, and then put on an aggravated air. Some will even write back to the ship after they have left it—no doubt a very great, but unsatisfactory, form of compliment to the surgeon on board, be he impecunious or otherwise.

Dental extractions, too, should be charged for.

There is no service so much abused and so little recognised as that of the doctor, all the world over, the sea being no exception to the rule. In fact, in many instances it is a glaring example thereof—

God and the doctor we alike adore,  
But only when in danger, not before;  
The danger o'er, both are alike requited,  
God is forgotten and the doctor slighted.

OWEN: 'Epigrams.'

The whole subject of fees is at present in a very unsatisfactory state, and is likely to remain so until some definite ruling in the matter is laid down. In a way, it seems quite just and proper that illness, acquired while at sea or at an intermediate port, venereal disease excepted, should be treated gratis ; but to turn the ship into a floating hospital open to any ' chronic ' able to pay ordinary passenger rates is ultra-philanthropic, and not calculated to enhance the dividends of a business concern, as all steamship companies are. Besides, it is most unpleasant for those who are well, and in a measure is an injustice to them. Moreover, under present conditions, in the estimation of some—a small minority, it is true—the surgeon is placed almost on the same level as a steward, expected to be at the gangway when the ship arrives at her destination, hand outstretched to receive his ' tip ' for services rendered.

The solution of this question rests entirely with the members of the medical profession. They should, as a body, decline to sail in ships under what is, after all, an ill-defined form of contract medical practice, except at a minimum wage of £10 a month, and their status and duties definitely defined. At present they have none beyond that of their own making, which may or may not lead to disagreement with the owner, ending in ultimate discharge from his employ.

There is no law compelling ship-owners to provide ' cabin passengers ' with medical attendance gratis (*vide* Appendix).

Moreover, it is a form of practice in which a fair proportion of patients are more than able to pay for medical attendance at ordinary rates, and are, as a class, more exacting in the attentions of the surgeon than if they were paying him a fee on land. In general practice

a patient is quite happy, and indeed fortunate, if the medical man calls within half an hour of being sent for, whereas, at sea they seem to consider that the surgeon should answer their call as a steward would a bell, little thinking he might be engaged elsewhere.

As the sea-going practitioner is but a bird of passage, so to speak, and quite independent of steamship companies for a living, there is little likelihood of any radical change taking place, much as it is to be desired for all concerned. Either let the companies absolutely prohibit the gratuity system, as obtains in French and German ships, increasing the surgeon's pay, with a rise after a term of service, or let a definite scale of fees be fixed for medical attendance and drugs in the case of saloon passengers. Steerage passengers coming under the provisions of the emigration portion of the Merchant Shipping Act being, of course, attended gratis.

Under existing circumstances, a surgeon must be carried on certain ships (*vide* Appendix IX.), and this being the case, owing to the keen competition in shipping circles, he is simply exploited for the benefit of the ship-owners, with little advantage or protection to himself. If he makes a just complaint or is adversely reported on by some aggrieved passenger, he is politely told that there are many applicants awaiting a vacancy.

When one considers that the sea-surgeon, often working under great disadvantages and single-handed, runs almost the same risk of an action for malpractice and blackmail as his colleague on land, it is only right that he should receive adequate remuneration for taking these risks.

It may be stated here that the resources of the Medical Defence Union, Limited, of London, are applicable, in case of need, to the service of its members practising on



the high seas in a British ship only, but not for the result of any incident occurring while the ship is lying at a foreign port of call.

So far the author has only stated the case from the surgeon's point of view ; that of the ship-owner must also, in due fairness, be given. The crux of the whole case lies in the fact that a ship surgeon is but an ephemeral individual, stopping there but a short time, and ready to leave his ship at an instant's notice when a favourable opening elsewhere presents itself. Men have left ships at the shortest notice possible, in some cases putting the owners to a lot of unnecessary trouble and expense, as well as delaying the sailing. In consequence of this, the owners naturally cannot be expected to give all consideration and receive none. Ships at times have to 'sign on' any man possessed of registered diplomas or degrees, quite regardless of his ability to fill the post. He may stay a voyage and then leave, and so the ball is kept rolling. As long as a registered medical practitioner figures on the ship's articles as such, then the owner has complied with statutory regulations.

There is no reason why the medical service of the mercantile marine should not be kept up to a good standard of efficiency, and at the same time be made a little more attractive, as far as conditions of service, etc., are concerned, for capable men to stay on. At present, conditions of service are anything and anyhow—no uniformity or regularity.

## CHAPTER VIII

### SEA-SICKNESS

WERE it not for the ubiquitous presence of this distressing condition, the author would fight shy of attempting to add to the literature on the subject already extant. It has been stated that out of a hundred cases, ninety-nine recover naturally, the remaining one being left 'to the mercy of the ship's doctor.' The hundredth case is not the only one of interest, but also the ninety-nine others.

After an active sea-going experience, the author has come to the conclusion that there is no drug or therapeutic measure infallible for this condition, although much can be done, by attention to detail, to alleviate the sufferings of the patient, and, indeed, must be done in certain cases of concomitant pathological states, such as morbus cordis, herniæ, etc. Speaking generally of the ninety-nine cases, the measures to be adopted will be discussed under various headings, with the reservation always that what is effective in one case, will probably fail in others.

Briefly, the stages of sea-sickness are as follows : The initial, where the victim, after a period of lively chaff, becomes suddenly subdued and quiet—as Jerome K. Jerome neatly expresses it, 'he ponders'—evincing a strong dislike to the use of tobacco by himself or others,

feels an indefinable something in the epigastrium, is cold and miserable, smiling feebly when spoken to, and apparently wishing to be left alone. The next stage is one of vomiting, preceded by profuse reflex salivation. While in this state, with blue lips, suffused eyes, complexion varied shades of green, and general disorder of mind, body, and apparel, his condition is one of abject misery and strongly deserving of sympathy. It is then that at first, he is afraid the ship will sink and all be drowned ; later on his plaint is that she will not. The final stage of convalescence is generally one of blatant uppishness as far as his less advanced fellow-passengers are concerned.

Before discussing the treatment of sea-sickness, it will be of advantage to endeavour to find out the causes at work in bringing this condition about. In the author's opinion, sea-sickness is the reflex result of certain psychical and physical causes, the former being summed up in a few words—the influence of suggestion. To certain people, the mere sight of a ship immediately suggests *mal-de-mer*, and cases are known of vomiting occurring shortly after going on board a vessel, while she is still made fast to the wharf. To a lesser degree, is this seen in people who are quite well as long as the ship is not under way, but as soon as port is left get sick, because, being on board ship, it is a natural thing to be ill or feel squeamish for the first few days. Further, although perfectly well during the early stages of the voyage, as soon as the ship enters a locality notorious for bad weather, such as the Bay of Biscay, Great Bight of Australia, Bay of Bengal, etc., a few among the number will feel sick, and possibly be sick, quite irrespective of the state of the sea at that particular time. It might be urged that, in the latter series of cases, the



movement of the ship, when entering a stretch of water with a bad reputation, was just the last straw which broke the camel's back ; but the author has repeatedly satisfied himself that this is not the case. On inquiring of the officer on the bridge, less motion if anything, than before, has been reported. Again, the sight and sound of others being sick are often quite sufficient to induce the process—a sort of sympathetic reflex. The author has known cases, in which the telling of the old salt's cure for sea-sickness—a lump of fat pork tied on to a piece of string and swallowed, only to be pulled up again—has had the same effect.

As to the physical causes of sea-sickness, evidence is strongly in favour of the vomiting being reflex to some stimulus of cerebral origin. What that central stimulus may be, the writer is not prepared to state definitely. Some observers locate it in the semicircular canals, and a disturbance of the equilibration centre. In connection with this theory the old sailor's yarn is of interest, and is mentioned for what it may be worth, as the author has not been able to verify it for himself. It is said that if an albatross be caught and put on deck it cannot fly away, and, further, if the ship is pitching and rolling about much, the bird soon vomits. This may be due to the altered motion. Yet, again, it is a clinical fact that infants in arms are very rarely sea-sick—one might almost say never. Now, whether this be due to the fact that they are so used to being jumped up and down and rocked about that the additional motion of a vessel has no effect upon them, or whether it is because their central nervous system is not sufficiently developed to appreciate it, is a matter very difficult to decide, and one which, if possible to ascertain accurately, would probably clear up all doubt on

this subject. On the other hand, there are those who attribute the vomiting to irritation of the visual centre, owing to the similarity of the vomit, which in uncomplicated cases—that is, those free from any previous gastric disturbance—is always hyperacid, to that of locomotor ataxia (*vide British Medical Journal*, May 20, 1905, p. 1089).

That the origin of sea-sickness is not primarily of a gastric nature the author is quite convinced, having known personally twenty or more cases of ‘irritable stomach,’ chronic dyspepsia, who never experienced what it was to be really sea-sick, no matter how bad the weather. In fact, he is almost inclined to think that chronic dyspeptics are, on the whole, better sailors than those endowed with a normal digestive function. In connection with the above theories, it would be interesting to determine whether victims of locomotor ataxia are more or less subject to the disturbing influence of a vessel at sea. Out of four cases, all in about the same stage of the disease, which the writer has met with, two were quite unaffected, the others being, if anything, rather bad sailors, and very resistant to treatment. Victims of ‘train sickness’ are notoriously bad sailors, and suffer most acutely. The writer has observed that dark-complexioned people are slightly more susceptible to the influence of the sea than the blonde type, male or female.

An important factor in the pathology of sea-sickness, and one not generally appreciated, is hepatic congestion or biliousness and its attendant constipation. Although not being the primary cause, it undoubtedly prolongs and aggravates the malady. It is a clinical fact that, where the voyage is begun in smooth water, and continues so for fifteen or sixteen days, as on the run from

England to Colombo during the prevalence of the South-West Monsoon, directly the ship gets into rough water, after passing Cape Guardafui, the effects are earlier apparent, more severe, and of longer duration than when the voyage has commenced with bad weather. This is undoubtedly due to the state of hepatic congestion, brought about by the undisturbed enjoyment of sixteen days of overeating, oversleeping, and lack of exercise so general among passengers at sea. It is one of the attendant troubles of a long sea voyage to those not previously warned about it. The general good living and *dolce far niente* state of existence on the modern mail-boat, being most conducive to hepatic congestion and a general condition of plethora.

Reverting now to the methods of treatment of sea-sickness. Although mentioned somewhat in detail, the author wishes to protest strongly against the use of depressant drugs as routine practice, on the grounds of empiricism and probable idiosyncrasy of the patients. The conditions which obtain, do not permit a careful inquiry into the latter. Moreover, the gastric disturbance which almost invariably follows their use, in the large quantities which have to be administered to obtain much effect, is a great contra-indication. The patient, it is true, may have been relieved of his sea-sickness, but only at the expense of a disordered stomach, which is then the next organ requiring treatment. Where the voyage is one of short duration, such as a Channel crossing, sea-sickness may be almost entirely prevented by free purgation and the administration of bromides two or three days prior to sailing. In fact, every patient, before starting for a Channel trip or sea voyage, should be ordered to take purgatives two or three nights previously, as routine advice on the



part of the family practitioner. It is astonishing, at times, to see the state of rectal congestion in which many passengers will embark on a sea-voyage, women, it is almost needless to add, being the worst offenders. If, however, the voyage be one of several weeks' duration, it is obviously undesirable to keep the patient saturated with bromides, etc., and the most rational thing to advise is careful attention to diet and the bowels. He should be told to live plainly, abstaining from the rich, savoury concoctions so dear to the chef, drinking alcohol in moderation, and, above all, obtain at least one good evacuation of the bowels daily, either by means of exercise or mild purgatives in the requisite doses. Drugs of a depressant nature should be withheld, for reasons mentioned previously, allowing a natural recovery to take place. Of course, where the vomiting and distress are severe, to prevent a state of general exhaustion and debility, these measures may have to be adopted. Careful rectal feeding is sometimes necessary in extreme cases, where the stomach can retain absolutely nothing.

The therapeutics of sea-sickness may be briefly stated in three words : Posture, diet, and drugs.

**Posture.**—In all cases the recumbent position is undoubtedly the best, either below in the bunk or on deck. The author strongly urges lying on deck out in the open, if possible, well wrapped up, so that the full benefit of strong fresh sea-air may be obtained. Unfortunately—although very naturally so—ladies are diffident about being on deck until they have acquired their sea-legs, preferring to be ill in the privacy of the cabin, in spite of its stuffiness and attendant discomforts. Additional comfort, while in this position, is afforded by a flannel binder drawn somewhat tightly round the

abdomen. In bad cases the head should be kept raised very little above the rest of the body, and a mustard-leaf or ice-poultice placed over the epigastrium.

**Diet.**—No fixed scheme of diet can be laid down, as sea-sick passengers often evince cravings for certain articles of food, somewhat analogous to the 'longings of pregnancy,' so marked among many women in the early months of gestation.

One case subsisted for four days on green apples, thin lunch biscuits, and weak brandy-and-soda, without vomiting occurring—all other food being steadily refused. Another, when feeling squeamish, had a predilection for grilled mutton-chops; a third for lean York ham. Others, again, prefer sour things, such as pickles or salted meat, smoked fish, etc., and there are many who want nothing at all. The main point to observe in the matter of diet is to feed little and often, so as to give the patient something to be 'sick with,' and avoid retching, leaving the selection to him. Where a great fancy for a special article of food is expressed, it should be gratified, no matter how bizarre or indigestible it may seem. The chances of it being retained are far greater than if something is given which the patient does not care about. Among some of the fancies expressed to the writer by those in the throes of sea-sickness may be instanced cold pork and chutney, lobster salad, sweetbread, steak and onions, etc. If no particular wish for any special article of diet exist, then fluids such as water or milk arrowroot, beef-tea, Liebig's extract, with pieces of crisp dry toast, are the best and easiest to retain and assimilate. They should be given frequently in small quantities, hot or cold, according to fancy. With fresh-made beef-tea all traces of fat should be carefully removed, as sea-sick

patients are most fastidious, a very slight detail being quite sufficient to turn them against nourishment of any kind. A small tablespoonful of Worcester sauce added to the beef-tea makes it more palatable to some sufferers. Iced champagne, slowly sipped, has been much extolled, but in the experience of the writer has not justified itself, except as a means of swelling the bar profits. Some patients prefer dry plain biscuits or toast, washed down with a little iced milk and soda, or brandy may be taken in preference to milk. Dry ginger-ale, allowed to defervesce before drinking, can often be retained when everything else fails. As a rule, there is a marked preference for cooled or iced drinks; hot drinks seem to be rejected far more rapidly. As mentioned previously, no special scale of diet can be prescribed, and the surgeon will do well to consult and gratify his patient's fancies as much as possible.

**Drugs.**—The number of drugs which have been used is legion, and no single one or combination thereof can be mentioned as a specific; in fact, no illness that human flesh is heir to, is so resistant to the influence of drugs as sea-sickness. Before prescribing any special drug, careful evacuation of the bowels should be obtained, without setting up a condition of looseness, otherwise the patient's sufferings will be greatly intensified by the synchronous incidence of vomiting and diarrhœa. The fluid extract of cascara, in a drachm dose, appears to be the most satisfactory form of purgative to administer, as it brings about a complete evacuation, without any purging or griping. If time presses, then an ordinary enema of soap and water or glycerine may be given to expedite matters. The bowels having been opened, one of the following may be tried: a



combination of bromide of potassium and chloralamide, sometimes known as chlorobrom.

R Potassii brom.	..	..	..	̄ss.
Chloralamide	..	..	..	̄ss.
Syrupi	..	..	..	̄i.
Aquam'	..	..	..	ad ̄i.

Sig.: Two tablespoonsful as initial dose; half that amount repeated every two hours for six doses.

Syrup of chloral combined with bromide of potassium is sometimes effective.

R Potassii brom.	..	..	..	grs. xx.
Syrupi chloral.	..	..	..	̄i.
Syrupi aurant.	..	..	..	̄i.
Aq.	..	..	..	ad ̄ss.

Sig.: A tablespoonful every two hours for six doses.

Sir T. Lauder Brunton's method of administering a drachm of bromide of potassium dissolved in a large bottle of iced soda-water and slowly sipped, is an excellent way of giving the drug. It has proved useful in many cases in which the writer has tried it.

As mentioned, the great contra-indication to the above class of drug is that, to obtain any effect at all, they must be given in large doses, oft repeated, which not infrequently set up a subsequent gastritis.

Dilute hydrocyanic acid in combination with morphia and bismuth will render relief, especially in cases of coexisting gastric disturbance.

R Acid. hydrocyan. dil.	..	..	..	℥ ii.
Liq. morphin. hydrochlor.	..	..	..	℥ vii.ss.
Bismuthi carb.	..	..	..	grs. x.
Syrupi	..	..	..	̄i.
Aq. menth. pip.	..	..	..	̄ss.

Sig.: A tablespoonful every two hours for six doses.

Tincture of iodine in ℥i. to ℥iii. doses in a wine-glass of water, every two or three hours, may afford relief. Creosote can be given in the same way, also the tincture of chiretta, which is most likely the active principle of a patent preparation—'Kreat Halviva'—sold for this purpose.

Chloretone has yielded very little result in the writer's practice—in fact, he has given up administering it at all except when other remedies fail.

Nitro-glycerine will be mentioned subsequently.

Antipyrin (grs. iiss.) with cocain hydrochlor. (gr.  $\frac{1}{8}$ ), every two hours for seven or eight doses, may be tried as a last resource, although the danger of subsequent cocainism must not be lost sight of. In fact, cocain should not be employed in repeated doses, unless the nature of the drug is withheld from the patient.

Cerium oxalate the author is unable to discuss, never having tried it, although the descriptive literature appears to warrant its use.

Validol, a comparatively recent German preparation of valerian and menthol, is at present on its trial, and, at the time of writing, has given very satisfactory results in 60 per cent. of cases. The prescribed method of giving it on a lump of sugar is not the best, owing to the sickliness of the sugar. It is better given neat, or in a weak alcoholic solution (℥x.) repeated in half an hour if required.

While on the subject of drugs, even at the risk of 'puffing' a proprietary article, due praise must be given to a liquid called Yanatas, which has afforded relief in many cases, especially for short voyages, such as a Channel crossing. Probably, however, like all other patent medicines not absolute frauds, the only thing patent about it is the price, which is high.

A dose of vegetable bitters combined with mineral acid is very grateful and comforting after an attack of vomiting. It seems, as patients say, 'to settle the stomach' until the next bout takes place.

Rx	Tinct. nucis vom.	..	..	℥ v.
	Tinct. gent. co.	..	..	℥ xx.
	Tinct. aurant.	..	..	℥ xx.
	Acid. hydrochlor. dil.	..	..	℥ xv.
	Aq.	..	..	ad ̄ss.

Sig.: A tablespoonful in a little water after vomiting, not more than once in three hours.

The above, made up with soda bicarb.(grs. xx.), instead of the acid, is preferred by some patients, especially in those cases where the vomit is hyperacid.

Where, in addition to sea-sickness, there is hepatic congestion, great relief is gained by the exhibition of calomel in small doses— $\frac{1}{8}$  or  $\frac{1}{6}$  grain every hour until 1 or 2 grains have been taken. This is then followed by a mild saline. Administered in this way, the 'alterative' action of the drug is obtained without any purging. As previously stated, purging and vomiting existing concurrently are not conducive to the patient's well-being, and should be avoided if possible. When patients, known to be subject to hepatic congestion, can be seen before embarking, then a 'liver pill' of podophyllin, euonym and aloin, taken at bedtime, and followed by a morning saline, is a suitable form of prophylactic treatment. They should be advised to obtain a stock and bring them to sea for use as required.

Referring now to the 'hundredth' cases, these are the ones which have proved fatal, and require most careful watching and treatment. Setting aside the complications of surgery or obstetrics, the cases to look



out for, are those of disease of the circulatory system, such as morbus cordis, arterio-sclerosis, also chronic nephritis—for example, arterio-sclerosis, with its hard, slow pulse, thickened and tortuous arteries, etc. In these cases vomiting, especially if accompanied with much straining, may easily terminate fatally through cerebral hæmorrhage—not to mention the results of minor hæmorrhages, such as retinal—if not checked. Here nitro-glycerine is the drug *par excellence* to employ—in fact, must be used. Given in the form of British Pharmacœpia tablets, one every hour for four or five hours, its effect is most marked on the pulse and general condition of the patient. Nitrite of amyl, although its effect is but transient, might be given during an attack of vomiting and straining, so as to relieve the high tension due to the expulsive efforts, superimposed upon the pathological high pressure, and thus prevent a possibility of cerebral hæmorrhage. Morphia, naturally, is contra-indicated, especially so if chronic interstitial nephritis be present as well.

In cases of pulmonary tuberculosis—and there are many to be found travelling backwards and forwards—there is always the danger of hæmoptysis to be feared. For some reason at present unknown to the writer, he is inclined to believe that the percentage incidence of hæmoptysis in these cases is higher than on land, so that the additional straining and retching must not be considered lightly.

Surgical conditions, such as herniæ, should be attended to, especially as some patients are in the habit of removing a truss when in bed. The action of the truss should be ascertained, and if satisfactory, must be kept on; if not, a pad and spica bandage must be applied as soon as, or before, vomiting occurs.

Pregnant women are generally afraid of abortion taking place during or after sea-sickness, and the mental effect of checking or allaying the vomiting is salutary. Accidental hæmorrhage, if it occur, is best treated by absolute rest in bed and opium in full doses. Menorrhagia is not uncommon at sea, occasionally cases being sent for the trip on this account. In two instances transfusion was deemed necessary, owing to severity of the hæmorrhage, sea-sickness occurring at the menstrual period.

A brief résumé of the foregoing chapter may not be out of place.

First, place the patient in the recumbent position, preferably on deck in the fresh air, and then attend to the bowels. Look or inquire for any concomitant pathological condition likely to be affected by the vomiting ; feel the pulse as routine practice, for cardiac and circulatory disorders.

Allow any article of food which may be wished for ; administer it hot or cold, little and often, but insist on something being taken, even if it is only water. If the vomiting be persistent or severe, then exhibit some drug or combination of drugs mentioned above, but only resort to them after other measures have failed.

## CHAPTER IX

### MEDICAL AND SURGICAL PRACTICE

GENERALLY speaking, practice at sea may be said to be confined chiefly to diseases of the alimentary tract, surgical incidents or accidents, exanthems, or any other infectious disorder, shipped at a port of call, and, lastly, invalids of all sorts and conditions, functional and organic.

Before describing methods of treatment, a few general remarks on matters medical will not be out of place for the beginner, and are therefore given somewhat fully.

**Stethoscopes.**—In the first place may be mentioned that binaural stethoscopes are practically useless on board ship for the purpose of ‘fine diagnosis,’ except under most favourable conditions. These, it is true, however, are increasing with the size of modern vessels. Direct auscultation or a wooden stethoscope are more reliable and satisfactory. At sea, there is the throb of engines, main and auxiliary, the straining of the ship, and the perpetual flow of the condenser discharge. In port, the rattle of winches working cargo, the shouts of stevedores or coolies at work, and sundry other noises, all causing a confused rumble, which requires much practice to eliminate successfully. The more delicate chest-pieces—phonendoscope, microphone, etc.—only accentuate the difficulty, and should not be



used. To avoid making a grave mistake, the author always refuses point-blank to give a definite diagnosis in chest cases, giving the above as his reason for doing so.

**Infectious Disease.**—Where an infectious or contagious disease develops, too great care and attention to detail cannot be expended in instituting and maintaining strict and immediate isolation of the patient. An epidemic disease will sometimes attack a ship's whole complement of passengers and crew before one is aware of what is happening, especially in those infectious prior to the appearance of a rash or any other definite symptom. Passengers also, will soon complain of and discuss any remissness, real or apparent, of the surgeon in this matter. Naturally, such cases will be landed at the first opportunity possible. The more modern ships have hospital cabins quite isolated from any others, into which infectious cases can be placed. When this is not the case, or the hospitals being full, a part of the deck must be screened off and converted into an emergency hospital. The best place for this is as far aft as possible, so that, except with a 'following breeze,' rare, as a rule, elsewhere than in the Red Sea, all airborne infection passes directly over the stern. The whole width of the deck should be taken in, so that there will always be a lee-side over which dejecta, etc., can be thrown, without removal from hospital precincts. If the weather does not permit of the deck being used, then a block of cabins must be similarly shut off, the water-tight doors of that section closed when possible, and its 'emergency exit' used as a hospital entrance. Every ship will probably have some place or other which could be converted into a hospital in emergency, and, failing that, for single

patients, the 'flying bridge,' if there be one, or a 'quarter' boat can be screened in.

A free display of carbolized sheets and disinfectants carries more moral than medical weight with those so far unaffected. The mental effect of an epidemic disease is naturally far greater among a collection of people having nothing to do all day but eat, sleep, and think about themselves, than among the members of the crew, busily occupied in the performance of their daily duties. Although cases of ordinary sickness on board should be kept secret, where an infantile disorder exists and there are many children on board, the fact is better made public, so that parents can take whatever extra precautions they may consider necessary, in addition to those ordered by the surgeon officially.

By experience it has been shown that mothers prefer to know of any danger threatening their little ones, rather than discover the fact for themselves when a playmate is suddenly lost sight of and said to be ill, the nature of the illness invariably leaking out. The tension of awaiting development of symptoms in their own children is apt to cause unpleasant discussions, etc., if this has not been done and everything kept *sub rosa*.

In connection with rashes, a wrinkle in diagnosis given the writer by a medical officer of the Port of London, and which has stood him in good stead more than once, is here mentioned. Where any doubt exists as to whether a rash is that of variola or varicella, it can be determined at once by selecting an area of skin on the trunk, preferably on the dorsum, and one of similar size on an extremity, comparing the number of vesicles in each. If the case is one of variola, then the greater number will be found on the 'extremity'

area ; whereas, if it is varicella, then the trunk area will show the greater number. Where there is not much difference, suspect variola, and act accordingly. The above fact does not appear to be well known, and the reader can imagine his own feelings if the verdict must be delayed, and ultimately prove to be variola. The author writes feelingly.

**Quarantine.**—In the matter of quarantine restrictions and obtaining free pratique for the ship, never, on any account whatever, attempt to mislead or obstruct the health officials at any port, home or foreign. If there is any suspicious case, or one likely to give rise to suspicion on their part, it should be declared and exposed for examination, as the consequences to the ship and one's professional reputation may be most serious.

Port medical officers are vested with full power to do what they like in the way of detaining or delaying a ship, and it is useless to attempt to bluff them. The commander is always anxious to get his ship berthed and 'entered' as soon as possible after arrival, and occasionally may suggest a little sharp practice on the surgeon's part. This must be decisively and distinctly objected to. The owners will neither help nor thank the surgeon who has got himself and the ship into bad odour, through trying to further their interests at the expense of his own professional reputation. Where owners' interests and the surgeon's professional reputation are diametrically opposed, as may, indeed, happen, there can be no question as to which must be sacrificed.

As the quarantine restrictions of different countries vary from time to time, it is impossible to state here what diseases are notifiable, generally speaking, and



the surgeon must be guided by the questions on the local health form. In the main, it is wiser to declare all major cases of sickness quite frankly. At English ports plague, cholera, and yellow fever are the only diseases which compel a ship to go into quarantine, other infectious cases being simply removed from the vessel by the local health authorities, as apart from the port authorities. Under these circumstances the ship is treated as an 'infected house' within the jurisdiction of the Public Health Act.

In the Commonwealth of Australia, where compulsory vaccination, unfortunately, does not obtain, a sharp look-out is naturally kept for cases of variola, in addition to plague.

Homeward-bound ships via the Suez Canal, are all subjected to a rigorous medical inspection at Suez for plague before being allowed to enter the canal, according to the Articles of the Venice Convention. Here, again, plague and cholera are the only diseases which will detain a ship; other cases, although notifiable, and which must be shown, do not delay her.

A death during the voyage may always be expected to give rise to a little difficulty in obtaining free pratique, and a full record of the case should be drawn up.

Of the red tape and crass futility of the usual sanitary precautions taken at most foreign ports before granting pratique, especially the Continental and Mediterranean ones, no mention need here be made. One or two personal experiences will soon satisfy readers for themselves.

Three or four bottles of corrosive sublimate crystals are poured down the bilges, and occasionally, by accident, if careful supervision be not exercised, into the drinking-water tanks. A few parcels of soiled

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linen, consisting mainly of handkerchiefs, socks, and towels, are taken away to be fumigated, returned to the ship stained and spoilt, and then the vessel is declared free from infection, receiving a certificate to that effect, for use later in the voyage, the whole performance being conducted by the port surgeon and his staff of sanitary satellites amid much verbiage and gesticulation.

**Method of Receiving Free Pratique.**—All large steamship companies have an official form of health certificate and most foreign and colonial port authorities require this to be supplemented by one of their own; in most cases they require also the commander's signature in addition to that of the surgeon. A stock of these should be obtained, and countersigned by the commander at the commencement of the voyage, so that there need be no delay when port is reached. The commander, as a rule, will object to be troubled for his signature while engaged in 'entering port.' All that is necessary in most cases, being the transfer of these documents and the ship's Bills of Health to the boarding health officer, who will thereupon grant free pratique if there be nothing to prevent him. The Bills of Health are generally kept with the rest of the ship's papers by the purser, who delivers them to the surgeon when required.

When entering a foreign or other port, the 'Q' flag, or 'Yellow Jack,' must always be flown until the vessel has received pratique. It is well for the surgeon to satisfy himself that the flag is hoisted, as some port sanitary officials easily stand on their dignity at an implied insult if this is not done, letting the ship await their leisure before coming off to clear her. Pratique having been granted, it is the surgeon's duty to report imme-

diately on the bridge to the commander, who will order the 'Yellow Jack' to be lowered. Then, and not until, is the ship free to communicate with the shore.

The granting of free pratique is a mere empty formality at most ports. At some, however, it is a source of vexatious and unnecessary annoyance to all on board. Passengers are turned out of their bunks—ports are generally reached in the early morning—and the crew mustered, only to file past the port-surgeon, or answer a roll-call, at the conclusion of which, the latter is little wiser as to the physical condition of all he has seen than he was before, and everywhere tempers are short. With a large number of passengers this ordeal is apt to be a great labour to the ship's surgeon, as some are sure to be found who resent the inspection, and will deliberately hide in bathrooms and lavatories, etc., having, after much delay, to be 'rounded up' into the place of inspection, by a gang of stewards. It is a good plan to affix on the official notice-boards throughout the ship, two or three days previous to arrival at a port where a muster of all souls is required, a notice explaining this fact. It should be worded in such a manner as to be clear to all, that this muster is absolutely necessary, and cannot be evaded; any person objecting to it is only delaying the whole ship, and keeping passengers on board. Port health officials have been known actually to leave a ship, half-way through muster, because some passenger refused to turn out, and proceed to another ship just entering the port, clear her, and return to a sadder, wiser, and angrier company. Where possible, the most likely objectors should be interviewed and the case definitely laid before them, pointing out that the refusal to comply will subject them to the odium of all concerned. Even



this, in some instances, will be unavailing, and nine times out of ten the recalcitrant is booked to leave the ship at that particular port, hence does not care what happens. In the appendix are given a health certificate form and a specimen muster notice.

**Lunatics.**—Now and again a person of unsound mind will figure on the passenger list, and requires to be dealt with very cautiously as regards restraint, suicide, etc., pending arrival at the next port, when he must be landed. People of eccentric habit, not to say mentally unsound, are frequently sent to sea 'for a change,' occasionally accompanied, but more often not. They are always a source of worry to the surgeon, and of annoyance or amusement to their fellow-passengers, until everybody gets accustomed to their presence on board, and leaves them alone. With these cases no definite line of action can be taken beyond having them quietly and carefully watched, acting as future circumstances indicate. As a rule, if left to themselves, and not annoyed by others, they will be perfectly harmless, and reach their destination safely, much to the relief of the ship's officials. With regard to real lunacy cases, great discretion must be exercised before applying restraint or locking them up in their rooms, unless, of course, an independent certificate can be obtained on board, or the case warrants it for the safety of others. If restraint is required, the commander must be informed, the facts entered in the official log-book, and statement signed by both. Naturally, the case will be landed at the earliest opportunity; only the certificate should be very carefully worded to avoid subsequent action at court of law for illegal detention or breach of the passage contract (*vide* Appendix).

**Alcoholics.**—The sale of liquor, to those addicted to

the habit of drinking to excess, can be restricted officially by the commander or surgeon of the ship—by the former on the grounds of disturbing the peace and comfort of others on board; by the latter for medical reasons. Repeated drunkenness on the part of a passenger is an offence which renders him liable to summary ejection from the ship under certain conditions, he having been previously warned. When a person's supply of liquor has been officially stopped, the stewards and all other members of the crew should be warned against supplying it surreptitiously, any man found out, to be made an example of. Also the bar-keepers, in various parts of the ship, should have the individual pointed out to them, as frequently a man, whose liquor is stopped in his own class, will attempt to obtain it elsewhere, and succeed if this is not done. The greatest difficulty in these cases is always raised by the man's fellow-passengers, who seem to think he is being ill-treated and the liberty of the subject interfered with. Here it is better to take the main offenders apart, explain the facts to them; failing this, they should be brought before the commander, who will then deal with them himself according to his powers. Application of restraint in delirium also requires entry into the official log, the entry being read over to the patient when sufficiently recovered to comprehend its import. It may here be stated that in a large ship it is practically impossible to keep a man from drink unless locked up in a remote cabin or kept under continual supervision.

**Deaths.**—When a death occurs at sea, it is advisable to dispose of the body as soon as possible, consistent, of course, with due regard to the feelings of relatives and friends on board. The presence of a corpse has a most depressing effect upon all, and the sooner the burial the

better. The time at which this rite is to take place should be kept concealed from all not intimately connected with it, and should be chosen so that the majority will be down below—either meal-time, church-time, or the early hours of the morning. The official form of certificate is given in the Appendix, in addition, an entry is made in the log-book, and the death reported to the British Consul at the next port of call. In the absence of a clergyman, the commander or his deputy reads the service prescribed for these occasions. Should there be a possibility of a fatal termination, and there is another medical man on board, he should be asked to meet the surgeon in consultation over the case. It makes matters less uncomfortable, and seems to divide the responsibility. If a death occur while the ship is lying at a port of call, the body must be landed, but when this event takes place shortly before the sailing time fixed upon, and the relatives are neither anxious nor able to pay for a funeral on land, then it is better to proceed to sea at the appointed time, and perform the burial shortly after. The circumstances of the case will be the best guide. In all cases of death on board, the surgeon must write an official letter, containing pertinent details, to the owners at home.

**Births at sea** are registered on special forms (*q.v.*), and ultimately entered in the Register of Births of the Diocese of Stepney, as a portion of which, all British ships on the high seas are recognised.

**Medico-legal Points in Connection with the Passenger Trade.**—One or two important points in connection with the law of passenger ships and trade require to be known, and are mentioned briefly here. An abstract of Part III. of the Merchant Shipping Acts will be found in Appendix IX.



Certain countries, such as the United States of America, Dominion of Canada, Commonwealth of Australia, and since January of 1906 the United Kingdom, have Immigration Restriction Laws applicable to passengers who are bodily or mentally unsound, or are destitute, or belong to a proscribed nation, a member of which is not allowed to enter the country, and forbid their being landed. In some countries the laws apply only to steerage passengers, in others to all classes.

*Steerage Passengers.*—It is customary in all ships carrying steerage passengers for them to ‘pass the doctor,’ generally as they are embarking or in a place set aside for this purpose the day before sailing, according to the laws of the country for which they are bound, and also the custom of the ship carrying them. Such ‘passing at the gangway,’ which is conducted in conjunction with a Government Emigration Health Officer at the port of departure, can only be very superficial at best. As the passengers are streaming up the gangway, loaded with hand-baggage and other impedimenta, time, as a rule, will not permit of more than a rapid scrutiny of faces for rashes, etc., or any other symptoms and signs pathognomonic of disease. The emigration officer’s duty consists solely of preventing the embarkation of any person suffering from an exanthem or other disease likely to be dangerous to the community; the onus of allowing all other pathological conditions to sail, rests entirely with the surgeon of the ship. He has, however, the power to refuse a passage to anyone of this class if he thinks reasons warrant it, either on medical grounds of unfitness to travel, or on account of carrying a passenger prohibited in certain countries from landing, giving a certificate to that effect. The latter reason is really a matter of the purser’s responsibility. Should

an 'undesirable' be discovered after the ship has sailed—and this is usually the case—the surgeon must make the best of a bad business, conferring with the commander on the advisability of landing him, to be returned to his departure port or carrying him on. If circumstances do not permit of the former, then the passenger must be carried on, detained on board at the commander's responsibility while the ship is in prohibited waters, and finally carried back to his original port of departure on the homeward voyage. The late Atlantic steerage rate war furnished numerous examples of this nature. On the arrival of the first ship—a German—nearly 40 per cent. of her steerage passengers were refused permission to land in the States for medical reasons, and had to be detained on board and finally conveyed back to Germany.

The cost of maintenance and return of a steerage passenger landed at an intermediate port of call, for reasons of health, is chargeable to the owners, through their agents, to the extent of eighteenpence per diem while on shore, as well as the return passage. Therefore, those noticed to be ill on embarking should be told to await the next steamer if circumstances indicate, also pregnant women in whom delivery is apparently imminent, some of them actually arranging to travel at that time so as to be delivered gratis. Everything considered, the inspection of passengers on embarking, from the ship-surgeon's point of view, is little better than the sanitary precautions previously derided in this chapter.

*Saloon.*—Printed on the backs of saloon tickets will generally be found a clause to the effect that the ticket is only issued, subject to the approval of the surgeon on board the steamer. Should a passenger embark in ill-health or fall sick during the voyage, and refuse to be

landed at the next port of call, or any port before his destination is reached, the ship can only land that passenger compulsorily if he be suffering from some disease dangerous to the community in general. Not otherwise, as the clause is not recognised in a court of law, and the company are liable to an action for breach of contract if the passenger is so landed. To make this clause hold good it must be enforced at the gangway, or before the vessel sails. It is doubtful, too, from what point of view a sympathetic jury might look upon a case of this nature—the inconvenience of the individual, or the care of officials for the benefit of all the other passengers at the expense of one.

The surgeon is occasionally confronted with the probability of a death occurring at sea, and the certainty of refusing proffered passage-money. Further, in a full ship with not a cabin to spare, a bad case of bronchiectasis, or some equally noxious disease, will spoil the whole passage for the other occupants. To say nothing of the rest of the passengers on board, who will immediately appeal to the purser, only to be referred by him to the surgeon, upon whom the brunt of the whole complaint will fall, he being t'wixt devil and deep sea. One or two discontented passengers will damage the reputation of a ship and her owners far more than a hundred contented ones.

The latter will rarely say anything about the comforts of a ship unless asked, whereas the former will go out of the way to ventilate their grievances, be they real or imaginary.

In these days of keen business competition between various lines it often requires fine discrimination on the part of the surgeon to decide for the best. He should rapidly and accurately sum up the case, make his



decision, and, if doubtful, refer a statement of it to the commander, managers, or agents, leaving the matter in their hands, and carry out whatever orders may be given to him on the subject.

**Visiting Lady Patients.**—All ships have a regulation, written or unwritten, which prohibits the surgeon visiting his lady patients in their cabin, except in the presence of a stewardess. The wisdom of this rule is perfectly obvious, requiring no comment. Occasionally, however, ladies will be met with who flatly refuse to see the surgeon in the presence of the stewardess. In these cases he should remain firm, and insist upon the stewardess being in attendance, the rule being mitigated by allowing her to remain in the alleyway outside the cabin, so as to be within call. As an alternative, he may suggest the presence of a friend or other lady passenger; failing that, he should report to the commander at once, and on no account remain in the cabin alone with the patient. Several actions have been threatened, some have taken place in the civil courts, through neglect of this precaution. Space and other reasons forbid examples being mentioned. There is no rule for the guidance of ship-surgeons which should be so strictly and consistently observed. In the event of a patient paying a professional visit to the surgeon in his cabin, a third party should always be present, unless, as in some ships, the room is situated at the after end of the promenade deck in full view of everyone.

**Stewardesses.**—Some stewardesses, especially the old hands, are sometimes apt to give advice on the diagnosis and treatment of cases, quoting former ship's surgeons as their authority. This can be quietly listened to and calmly ignored without any show of open resentment or professional dignity. The surgeon should always

endeavour to keep on friendly terms with them without loss of prestige, etc., as stewardesses have it in their power to cause or save him a large amount of unnecessary and vexatious annoyance, without his being able to retaliate or defend himself. They are not under his supreme control, as nurses at a hospital would be, although by tact and good management can always be induced to do, what he cannot very well order or ask them to carry out. Further, he will always get early information as to infantile or other illness, as they have greater opportunities than he of being with passengers, and are, as a rule, first to notice symptoms.

**Nursing.**—The question is often raised as to whether large ocean steamers ought not to be compelled by law, to carry a trained hospital nurse as part of their crew. It is the writer's opinion, and that of many colleagues with whom the matter has been freely discussed, that a trained nurse on board is not absolutely necessary. The occasions on which her professional services would be required are far and few between, taking a general average of voyages, and in these cases a day and night nurse would probably be wanted. At other times there would be very little for her to do, beyond perhaps looking after linen, as it is extremely doubtful whether a trained nurse would 'sign on' to do stewardess' work as well, when not occupied professionally, like a musician, who 'signs on' as a bandsman-steward. If not, she would probably have to be berthed apart from the stewardesses, and as likely as not come into conflict with them over some detail of nursing routine.

The author's experience of trained nurses at sea is not a pleasant one, and in a difficult case he prefers the assistance of an untrained person, whom he can trust to carry out instructions to the letter, such as a



stewardess, to that of a highly-trained professional. There is a constant tendency in persons trained to a certain routine, to carry out that routine wherever they may find themselves. Practical experience has shown that it is quite impossible to carry out the routine of sick-nursing on board ship in the way it is done in hospital or home on land. Circumstances are totally different, and the occasions on which the author has come into conflict with trained nurses who, being passengers on board, had volunteered their services, have all been over the matter of nursing routine.

One of the first things to happen, when a passenger-nurse takes a case in hand, is generally friction with the stewardess over some petty little detail, the latter, too, taking offence at someone else supplanting her. The cabin is transformed into a miniature ward, temperature chart hung up, thermometer put in a tooth-glass containing antiseptic, and the nurse settles down to her task. She takes four hourly records of pulse and temperature, and generally does something for the patient on her own initiative, discussing nursing methods generally and those of the ship's doctor in particular. When anything is wanted, the stewardess is rung for and ordered to get it ; then the trouble arises for the unfortunate doctor.

From inquiries made of other surgeons, the author's experience in this matter is not unique, and he now makes a practice of gently refusing all volunteer nurses, carrying on with the stewardess as well as circumstances permit.

There is no doubt whatever that, on full voyages, an extra stewardess might be carried, who could be put on to nursing if necessity arose. Unfortunately, however, there is no law compelling ships to carry stewardesses



at all, except under certain conditions, when a 'matron' must be carried in the steerage. The number carried rests entirely with the owners, before whom this question should be laid.

A solution of the nursing problem might be obtained as follows : A trained nurse would 'sign on' at a nominal rate of £1 a month. She would sign as a 'trained nurse,' directly under the orders of the surgeon. When her professional services were required by saloon passengers, she would be entitled to demand and retain a fee, the amount of which was previously fixed by the company. In the case of steerage passengers, her services would be part of the duties of her engagement, and rendered gratis. Care of the ship's linen would also constitute part of the work. In the event of more than one demand for her attendance among passengers, gravity of the case, as decided by the surgeon, would settle the question. She would wear uniform, be berthed alone, and might take her meals either in the second saloon or in her cabin. Stewardesses would be under her orders. There are, no doubt, plenty of certificated nurses who would be willing and eager to spend a year or two at sea under these conditions, to the mutual advantage of passengers and themselves, and at little cost to the company. In fact, a trained nurse would be an inducement for invalid passengers to travel in a ship carrying one.

**Reports.**—At the termination of each voyage, the surgeon has to send in a report of his work, the form of which varies in different companies. Some require a full history of cases, others only want a tabulated record. Dates are very important in infectious disorders, and should be carefully noted.

## CHAPTER X

### PRACTICE—(*continued*)

**Selection of Crew.**—The crew, as a whole, are, or should be, healthy, any obvious case of disease being rejected when the men muster to ‘sign articles’ prior to commencing the voyage. When the crew muster at the shipping office or on board to ‘sign on,’ it is usual for the surgeon to be present. The writer makes a point of examining all hands joining for the first time, in a little ante-room, before allowing them to sign. In this way, all those medically unfit are prevented from joining, and the standard of health kept at a high level, while the daily sick-list is confined more or less to what may be termed casual cases incidental to a voyage. A ‘medical crock’ who has been allowed to join is a source of perpetual annoyance to all intimately connected with him, besides being a loss to the owners. As very few passenger ships are away from England more than four months or so, the question of ‘fitness’ is not looked upon as being so important as in the case of candidates for the public services, and a rigid medical examination is not customary. Now, that this is quite a fallacy need hardly be stated, and the author strongly urges his readers to examine crews, before joining, more or less thoroughly. They will save themselves much trouble during the voyage at the cost of a few hours before

sailing, and also ensure a complement of men able to do the work for which they are carried and paid.

A casual glance should be directed to the teeth ; to the legs for ulcers and bad varicose veins. The heart should be roughly auscultated at apex and base, especially in the case of firemen and trimmers. 'Stoker's heart,' which is a condition mainly of dilatation, with irregularity and rapidity of action, is not uncommonly met with, and in mild cases prevents the patient doing his full share of work. In severe cases, it totally incapacitates him.

A hernia, unless easily reducible and fitted with an effective truss, should as a rule be excluded : in trimmers and firemen always. Also the subject of a 'weak chest,' who has been advised to obtain employment on board ship.

Gonorrhœa, acute and chronic, is also better excluded if there are sufficient men to choose from. The surgeon in examining the crew must remember that in no department of the ship is the work light, the stewards especially being very hard worked. Their hours are long and irregular—in a large passenger ship, from about 5 a.m. to 10 p.m., with a possible snatch of sleep in the afternoon. In addition to this, they have to keep night watches of two hours each, between 10 p.m. and 5 a.m., in rotation. A further hardship is entailed by their inability to sit down for meals, having to picnic wherever possible in pantries, galleys, and alleyways. With all this, they are uniformly civil and attentive, and undoubtedly, the only inducement for a man to remain in this department, is the money he hopes to earn in tips. As a class, they are more run down and unhealthy-looking than any other body of men on board, not even excepting the engine-room crew. The latter have watches



of four hours on and eight off. Sailors work watch and watch, four on and four off.

Alcohol, accidents, and venereal disease, with their complications, constitute by far the larger number of cases among the crew. Cases of the former, when reported on the daily sick-list handed to the commander at official inspection, are liable to have their pay stopped during such time as they are unable to work. It is doubtful whether this applies to disablement through venereal disease (*vide* Appendix IX.).

**Malingering.**—This is occasionally met with, more so among coloured crews, where more than the actual number required to do the work are carried, and one is always found to fill a vacancy. On the other hand, with white crews, their numbers are reduced to a minimum, consequently, any man falling sick and going off duty entails extra work for the rest of the watch. As a rule, a man's watch-mates will not allow him to go off duty unnecessarily, although always willing to do his share of work if he be really sick. This forms an excellent check to the professional loafer. Stewards as a class rarely mangle, for obvious reasons, and will carry on till they drop. It is good practice, when occasion arises, to order a member of this department twenty-four hours rest. Lack of sleep, long hours, bad living-quarters, and a want of open-air employment are the cause of most sickness and loss of vitality amongst them. Phthisis is a common termination of stewards' lives.

Firemen, as a rule, compose the majority of malingers among white crews, generally with the idea of obtaining luxuries of diet and evading the heat of engine-room and stokehold. They are very fastidious, and, at the same time, greedy feeders, over-eating themselves rather than allow any morsel of food to remain in the dish

untouched. Further, as soon as three meat meals per diem cannot be eaten, they will complain of loss of appetite. Their usual complaint is backache, stomach-ache, and blood in the water, occasionally embellished by giddiness and vomiting. Internal cramps will also be complained of—in fact, everything which is not directly visible or tangible. A slight burn or scratch will be magnified into a severe injury, to which, however, application of 1 in 20 carbolic will soon reduce to smaller dimensions on subsequent occasions.

The most satisfactory way of dealing with an undoubted malingerer is to watch him in bed in hospital or some other place apart from the rest. His tobacco must be stopped, and diet restricted to a pint of milk, a pint of water-arrowroot, and water *ad lib.* for the twenty-four hours, having previously personally administered an ounce or more of crude castor oil. Very few will last for more than thirty-six hours, and there is a danger of the surgeon being called upon to treat a case of acute over-engorgement of the stomach when the man returns to the firemen's fo'csle. As the man leaves the hospital, at his own wish, he should then be told, not before, that he has received the treatment meted out to men of his stamp. The news will soon spread round the ship, and prevent any more cases.

Members of deck crews do not malingere much, as amongst them it is considered *infra dig.*, and, moreover, they are drawn from a better class than firemen, many belonging to the Naval Reserve. Firemen as a class are some of the lowest types of humanity, being little short of brute-beasts. The mere fact of a man being in the stokehold is almost enough to stamp him as unemployable on land.

**Asiatic Crews.**—*Malingering.*—The workings of an Asiatic's mind are an interesting and at the same time subtle study. The majority of natives are just as diffident about consulting a white man as the latter is of being treated by a native practitioner, having their own national remedies for minor ailments. When, however, the case becomes serious, or it suits them, they are only too eager to see the Doctor Sahib, and there is no limit to the means they will employ to gain this purpose. One of the common complaints is 'fever.' Time after time, with no other indications of pyrexia present, or question of a spurious record, the author has taken the temperatures, and found a rise of  $1^{\circ}$  to  $3^{\circ}$  above normal. It is an open question whether the average normal temperature of the Lascar is not higher than that of a European. Owing to the obvious objection attached to mustering a gang of Lascars for a daily record, the matter is but a conjecture on the author's part, although well worth remembering when an obscure case of mild pyrexia presents itself. Particularly so if the man is a sailor, anxious to evade his 'look-out' on the fo'csle head in dirty weather. It is a favourite method of attempting it with them. One 5-grain dose of quinine, in plain acid solution, administered in the surgeon's presence will prevent a repetition of 'fever cases' among the more timid. With persistent malingerers, entailing much physical discomfort and suffering, only the experience of the surgeon will be of any use in differentiating the wheat from the chaff, and no set rules can be laid down. The following, related by a P. and O. surgeon, admirably illustrates one of this type: A Lascar deck-hand, who had many times previously reported himself sick and been nonsuited, was assisted to the surgery one morning with extensive œdema of



the right leg. Heart, lungs, and urine proved normal, beri-beri and blocked veins excluded, leaving nothing to account for the case. At the suggestion of the serang, or head-man, the patient was made to strip entirely—incidentally, it may be mentioned, that natives strongly resent exposure of genitals—disclosing a tight ligature round the femoral region which had ‘bitten deep,’ and must have been causing excruciating agony. The mis-directed perseverance of the man was worthy of admiration.

If, after careful and repeated examinations, the surgeon is convinced that a man is malingering, the best course to pursue, having warned him previously, is to report the matter to the commander. A fine of one to three days’ pay will probably be inflicted, and prevent recurrences. The only way to touch a Lascar is through his pocket, abuse and raillery only serving to make him mulish and obstinate.

*Fatalism.*—A most important fact in dealing with Oriental crews, particularly Lascars, is their fatalism and low estimation of the value of human life. If ‘a sense of impending dissolution’ take hold of a man, no matter how slight or trivial his ailment, then the prognosis is indeed grave. The surgeon’s personality and prestige with the crew will do more to save that man’s life than the whole Pharmacopœia and surgery combined.

*Caste and Religious Principles.*—These should on no account be violated, or trouble will certainly arise. Many will undergo any amount of suffering and discomfort rather than offend against a caste or religious principle. During the observance of a certain religious festival, on the occasion of which nothing is taken by the mouth, liquid or solid, between the hours of sunrise

and sunset, a man complained of severe headache and constipation. He was obviously suffering acutely, but on the relieving draught being offered, he refused to drink it, asking leave to take it away, wait all day, and drink it after sundown. Such spirit of religion is certainly to be admired even in a poor heathen.

Again, some will not drink or eat out of European utensils, bringing their own to the surgery. A white man's shadow falling across their 'curry-stuff' will render it unfit for consumption with certain castes.

*Medicines.*—In making up medicine for natives, sweet-tasting preparations should be avoided if possible, otherwise they will return again and again for another bottle. Tinct. camph. co. should be omitted from cough-mixtures for this reason, and also on account of the opium contained in it. As an efficient and at the same time slightly nauseous cough-mixture, the following will serve most purposes :

R Ammon. carb.	..	..	grs. v.
Potass. nitrat.	..	..	grs. vii.ss.
Vin. ipecac.	..	..	℥ xv.
Spir. æther. nit.	..	..	ʒss.
Aq. camph.	..	ad	ʒi.

It saves time and trouble if a concentrated solution is made in an 8-ounce bottle, an ounce of which, with 7 ounces of camphor-water, making eight doses. The above is suitable also for steerage passengers, who, having paid their fare, will take it out to the last farthing in every conceivable way.

Asafoetida is useless as a component of a *mistura diabolici* for natives, as some castes are very partial to it, using it in their culinary arrangements; castor oil seems to be the best method of repressing a desire for unnecessary medical attendance. It must

be given pure and undisguised in the presence of the surgeon.

In cold weather, mustard oil or other stimulating liniments are much appreciated by Lascars, although it is marvellous how well they stand cold—for instance, 'liners' making yachting-cruises to the ice-pack and Norwegian fjords.

*Alcohol.*—Whenever this drug is indicated as a therapeutic agent, it must be administered out of a medicine bottle, as strict Mohammedans and Hindoos are stanch teetotallers. It must also not be insisted on if they refuse to take it. Moreover, the lower the caste, such as sweepers, scullions, etc., the less difficulty will be experienced in getting them to drink it. In fact, some of them become semi-civilized after a time, and consequently not averse to alcohol, often in excess.

*Opium Habit.*—Where the diagnosis of a case is obscure, and the man is not malingering, inquiry should be made in reference to the opium habit. Now and again its votaries run out of stock, and a daily allowance of the drug will set things right when other measures have failed. This applies also to Chinese and Malay crews.

*Laying up.*—When dealing with a native crew, it is advisable to 'lay them off watch' earlier than a European one, as the presence of a slightly sick man, working in a chicken-hearted manner, tends to demoralize the rest. In other words, a Lascar would be put off duty sooner and for a more trivial complaint than a white man. Lascars, when sick, always swathe the head in many folds of cloth. This is invariably a correct sign that a man is really sick. The right stage at which to put him off watch can only be determined by practical experience, and, unfortunately, no fixed rules for



guidance can be laid down. Sympathy for suffering must be judiciously tempered, and where possible twenty-four hours should be allowed to elapse before laying a man up entirely, otherwise if an easy-going reputation be once established, there will be no end to the daily surgery attendance. The difficulty is added to by the fact that there are no 'half-jobs' for anyone on board; a man is either fit or unfit for duty. There are many cases quite capable of light work which, on account of medical reasons, have to be condemned to an enforced idleness for want of it.

**Invalid Diet.**—The dieting of the sick on board is necessarily restricted, being confined more or less to milk and beef-tea. Milk at sea is supplied usually in one or more of the following varieties: in frozen blocks, condensed, powdered, or concentrated. Of them all, the latter is the nearest approach to the natural article, being simply ordinary milk, dehydrated to a quarter of its original volume, and to which is added, in spite of all assertions to the contrary, some preservative agent, probably boracic acid. Now, it is not the quality of the agent that is objected to, but the varying quantity. A certain amount of boracic acid up to 4 per cent. is requisite for the proper preservation of the fluid, and does little harm in most cases; but, unfortunately, this amount is not always strictly adhered to, and this must always be borne in mind when a sick person is placed almost wholly on a milk diet. For use, milk in concentrated form is simply diluted to its original volume with water, and well stirred.

The methods of using condensed milk require no comment. Frozen milk does not appear to have justified expectations, and most ships have given it up.

So-called 'milk from the cow' has been discussed in a former chapter.

Additional to ordinary milk for general consumption, Horlick's malted milk should be carried; it forms an agreeable change, and is most useful if there are many infants on board. Some cannot thrive on the concentrated or condensed varieties, the former especially seeming to aggravate diarrhœa, probably owing to the contained preservative. Various milk foods require no mention.

Ship's beef-tea, as usually served in the middle of the morning, is, as a rule, quite strong enough for invalid use; if not, a special brew may be ordered. For seasickness it is too greasy unless strained, and can be substituted by Liebig's extract, etc., according to fancy. Brand's essence is an excellent way of giving nourishment in concentrated form to invalids; it can be served in jelly form, spread on thin dry toast with a little pepper and salt, or liquefied with hot water, a dash of Worcester sauce being added to taste.

An advanced diet is obtained by the usual milk puddings, arrowroot, cocoa, or chocolate, and pounded fish and meat. The main difficulty, where illness is protracted, is that milk and beef-tea soon become irksome; variety can be made by beating up an egg in them, or combining jelly with them. A good diet scale for invalid use on board is a test of the surgeon's ingenuity. When any special or extras of diet are ordered, full particulars must be given on a slip, signed by the surgeon, and sent to the pantry. A manifold copy-book is useful for record. Some ships have special order-forms, as the essence of proper management at sea is routine method, strictly observed.

**Infants.**—As some lines of ships are generally recog-

nised as catering for families, infants of all ages and sizes are likely to be met with. As a rule, they stand a sea voyage very well. The usual trouble with them is diarrhœa, prickly heat, and over-clothing. In tropical latitudes, very soft wool or flannel next to the skin is all they require, and the less swathed up in frillings, etc., they are, the better. For some reason best known to mothers, the majority of clothes on a baby under eighteen months old, are situated, as a rule, some two feet beyond its lower extremities. In continuous diarrhœa, it is good practice to wash out the lower bowel, as high up as possible, with warm boracic acid solution (grs. iv. ad  $\bar{3}$ i), by means of a soft Jacques catheter, No. 12. Prickly heat is almost unavoidable, however much care be taken. Contiguous skin surfaces should be well dusted over with a mixture of boracic acid, zinc oxide, and fuller's earth, in equal parts, or any bland dusting-powder.



## CHAPTER XI

### OUTLINES OF TREATMENT

WHILE in no way attempting to write a handbook of therapeutics, the author submits his own ideas and methods, leaving their adoption to the reader. The ailments are discussed at random, without attempt at sequence or classification.

**Headache.**—The majority of headaches at sea are due to constipation and biliousness, being relieved by the usual purgatives. Not infrequently after a day on shore, people will complain of severe headache situated over the occipital and frontal regions. The cause is most likely found in the unusual exertions of sight-seeing—glare and heat of the sun in tropical ports after a week's comparative rest on board. A mixture of phenacetin (grs. viii.) and caffein citrate (grs. ii.) will generally set things right in one or two doses. Victims of sore or weak eyes should be told to wear smoked glasses and avoid the glare, both at sea and ashore. At times the glare from the sea is most trying, even to those accustomed to it, giving rise to headache and slight conjunctivitis. For these cases, a lotion of boracic acid (grs. vii. ad  $\bar{z}$ i.), or warm salt water, is beneficial.

**Neuralgia.**—This is rather a common complaint among passengers, and may be either dental or aural, or of a type affecting the larger nerves, such as sciatica.

For dental cases due primarily to a decayed tooth, nothing short of extraction, succeeds so well as quinine sulphate (grs. v.) in acid solution. The relief obtained is sometimes little short of miraculous. Plugging the cavity with bicarbonate of soda and a little cotton-wool is often effective (Dyce-Duckworth). In addition to the ordinary methods of relieving earache not due to sepsis, chloroform vapour can be tried. The simplest way is to pour a drachm of the liquid on a plug of cotton-wool, and place it inside a  $\frac{1}{2}$ -ounce glass urethral syringe, from which the piston has been removed. The barrel is then connected up with a Higginson's enema syringe, the chloroform vapourized, and gently blown into the external auditory meatus. For a few seconds this proceeding is rather painful, after which the anæsthetic effect takes place, and lasts for a considerable time. Insufflation should be kept up for five minutes or so. An alternative method is to put the plug of wool into the bowl of a clean clay pipe and apply the lips to it. It is, however, not so nice for the patient, or comfortable for the operator. Sciatica, etc., must be treated on the usual lines.

**Constipation.**—Owing to the combined effect of rich living, lack of exercise, and bracing state of the atmosphere at most times, this condition is much more common and obstinate at sea than on land. The majority of passengers will bring their own stock of aperients, in the form of Eno's Fruit Salt, citrate of magnesia, health salts, etc., most of which are quite ineffective in the usual dose. They will allow three, five, or even ten days for these to act before consulting the surgeon, and then will only complain of headache and malaise, making no mention of constipation unless directly asked.

In these cases the best remedy is *ol. ricini*,  $\bar{z}$ i. by the mouth, and a glycerine and olive oil enema *per rectum*. Ship's castor oil not being of the so-called 'cold-drawn tasteless' variety, a good method of giving it in a pleasant form is as follows: A sherry glass is filled with water to the brim and then emptied, taking care that the sides are quite moist. A thin layer of brandy or other liqueur is poured into it; then the dose of castor oil is gently put in over the brandy, without mixing. A final layer of brandy is next poured on to the oil, and the whole swallowed like an oyster. Given in this manner the oil is scarcely tasted. As a continuous aperient the 'tinctura laxativa' mentioned in Martindale and Westcott's 'Extra Pharmacopœia' is of great value. The formula is appended below:

R	Ext. cascaræ sagradæ liq.	} āā partes ii.
	Spir. ammon. aromat.	
	Spir. chloroformi	
	Tinct. nucis vomicæ.	} āā partes i.
	Tinct. belladonnæ	

The author's plan is to give an initial dose of 1 drachm, followed by  $\mathfrak{M}$ xv. to xxx. thrice daily, after food, as required. The requisite dose can be regulated to a fine degree of activity, and its effect does not seem to wear off by toleration.

For firemen, who are all great meat-eaters, and members of the crew, the *mist. sennæ co.* should be augmented by *mag. sulph.*, 1 drachm to the ounce. Castor oil here, too, is a good purgative, although in the hot weather it is not well borne, being rejected in many cases.

**Biliousness and Hepatic Congestion.**—For this, calomel in  $\frac{1}{8}$ -grain doses every hour until  $1\frac{1}{2}$  grains have been taken, followed by a mild saline, is very effective.



When taken this way the patient need not necessarily lie down, although it is better for him to remain quiet. At the same time he should be slightly starved for twenty-four hours, subsisting on dry toast, weak tea, with a squeeze of lemon-juice in it, and without milk or sugar. Soda-water can be drunk *ad lib.* Mild cases can be relieved by the old-fashioned 'blue pill' at night and 'black draught' before breakfast next morning, or pil. rhœi co. (grs. iv.) every other night, or a pill containing podophyllin, euonym, or aloin.

**Diarrhœa.**—This condition is always a source of anxiety, being often, so to speak, a harbinger of woe, and should never be neglected. In addition to ordinary sources, the cause must be looked for in the ship's water-supply, indiscretions of diet either on board or ashore at foreign ports, Colombo especially. Diarrhœa arising after a visit to Colombo is always attributed to 'curried prawns,' and clinical observations seem to support this contention. Residents of the island of Ceylon very rarely touch this delicacy. Other causes are excessive use of iced drinks, which in some set up a condition of acute intestinal catarrh, with much griping and watery motions, streaked with mucus and blood. On one occasion, out of 800 souls on board, while in the Red Sea, five days from last port, sixty cases of diarrhœa and colic reported themselves within thirty-six hours. After careful inquiry as to cause, it was found that all the cases were confined to those having free access to ice and iced drinks—viz., saloon passengers and stewards—no one among the steerage passengers or other departments of the crew being affected. A large percentage of the sufferers were elderly, and the only conclusion possible was that it

was, for want of a better name, a thermal diarrhœa set up by too much ice and iced liquids.

Nowadays water is rarely a cause, but the possibility must not be forgotten. Rough tests for organic impurities can be made with a solution of potassium permanganate, also acid solution of silver nitrate and potassium iodide, starch and sulphuric acid. A Burroughs-Wellcome portable water analysis case might, with advantage, be carried on all large passenger ships.

There is another variety met with in the tropics, which is somewhat choleraic in nature—milky fluid stools, with much griping and tenesmus, accompanied by sweating and collapse. This is ordinarily termed tropical diarrhœa, and is catarrhal in character.

Excessive use of health salts, etc., is occasionally liable to set up a chronic looseness from irritation of the intestinal mucous membrane.

As to treatment, the golden rule to purge if less than twenty-four hours have elapsed, and to astringe after that period, holds equally well at sea as on land. To particularize, in cases due to indiscretion of diet, etc., 1 ounce of castor oil, with or without 10 to 15 minims of chlorodyne, according to whether there is much pain is the best remedy.

The diet should be limited to bland farinaceous foods—arrowroot, custard, dry toast moistened with milk, etc.

In the tropical or thermal type a more astringent course of treatment, with care in dieting, is indicated. Spirits of camphor (℥v. to ℥xx.) in 1 ounce of brandy every three hours; 1 ounce of a mixture containing brandy and port wine in equal parts every three or four hours, may be tried. Pulv. creta aromat., with or without opium, four times a day, after food, affords relief. The intense thirst always present in these cases

can be allayed by small sips of cooled barley-water or imperial drink at intervals. Washing the lower bowel out slowly, the pelvis being well raised, with a solution of saturated boracic acid or soda bicarb. (grs. xx. to the ounce), is very soothing to the mucous membrane, and in a measure tends to relieve thirst. A pint at a time should be used, once or twice daily, as indicated.

After a preliminary dose of castor oil has been administered and is of no avail, the following mixture may be given for thirty-six hours or so, pending diagnosis, without much harm. It should not be continued for a longer time, owing to the possibility of the opium contained therein masking symptoms :

R	Tinct. ferri perchlor.	..	..	℥ v.
	Tinct. opii	..	..	℥ vii. ss.
	Acid. sulphuric. aromat.	..	..	℥ xv.
	Tinct. cardam. co.	..	..	℥ xv.
	Aquam	..	..	ad ℥i.

Sig. : ℥i. every four hours.

Needless to say, in protracted cases the stools must always be examined. The diet should be arranged so as to limit the amount of fluid, and avoid much matter of an irritating nature. Beef-tea should be well strained, and is better made into a jelly. Milk, with the white of egg beaten up in it is bland, yet sustaining. Enough nourishment is obtained for the day in the following scale :

Milk, 1 pint.  
 Beef-tea or Lemco, etc., 1 pint.  
 Brandy, ℥iv., if indicated.  
 Custard, arrowroot, or jelly.  
 Dry unsweetened biscuits or toast.  
 Albumen water, 1 pint.

Other ' foods ' or invalid preparations can be added.



**Dysentery.**—With a limited experience of true amœbic dysentery—all diarrhœa in the tropics is loosely termed dysentery—the author is inclined to prefer ipecacuanha to other drugs, Epsom salts, castor oil and calomel, etc. Nausea and vomiting can be avoided by giving morphia (gr.  $\frac{1}{4}$ ) fifteen minutes before administering the ipecacuanha powder, in 20-grain doses, four-hourly. Most cases will show signs of improvement about thirty-six hours later. Another method is to combine 15 grains of ipecacuanha with 10 grains of Dover's powder, three times a day. Here Morstadt's wafer cachets are most useful. It is unnecessary to state that the patient must be kept lying down in bed, and warmly clad, remaining as still as possible, for at least half an hour after the drug has been taken. The most suitable diet is warm, clear bouillon and egg. Milk is never so well borne, and alcohol must be kept in reserve in case of collapse. The heart should be carefully watched for symptoms of the latter. If the condition becomes chronic, the lower bowel should be slowly irrigated with a warm solution of turpentine (1 drachm to the pint), silver nitrate (10 grains to the pint), or saturated boracic. This can be done once or twice daily.

**Sprue.**—On ships trading to the East, will not infrequently be found cases of sprue, or psilosis, invalided home to England. Without in any way attempting to describe symptoms, etc., beyond stating that sore mouth and tongue are not an essential sign or accompaniment of the disease—indeed, there is a class of case in which it never occurs at all, or only as a late development—a few brief outlines on the management of these cases are here given.

In the first instance, according to our present knowledge, milk is not the correct treatment to pursue. It

may check the diarrhœa, but will not cure the cause ; in fact, one would almost say that it is contra-indicated except in very limited quantities (Cantlie). Meat under-done is the only satisfactory treatment. Drugs are practically useless, except for the relief of symptoms ; in fact, it might almost be stated that the whole régime of treatment is one of diet. Meat should be given three or four times daily with thin toast, green vegetables, and water-boiled rice-puddings. Stewed fruits, especially apples, are permitted ; strawberries appear to have a specific action on the disease. Soup made from liver, if obtainable on board, is also strongly indicated. Made dishes, curries, etc., are forbidden, also tea and coffee. Cocoa is allowed. For the intense thirst so commonly present barley-water, orange or lemon squash may be given. Whisky-and-soda at meal-times, if desired, may be allowed.

While staying the intestinal flux, constipation is to be studiously avoided ; at least one, preferably two, evacuations should be obtained daily. When this is not the case, copious warm water enemata are to be given, with the buttocks well raised. In this way thirst is often alleviated as well.

As previously mentioned, drugs must only be used symptomatically. If the stools are at all 'livery'—*i.e.*, clay-coloured—two or three doses of calomel (gr.  $\frac{1}{3}$ ) will generally stimulate the liver sufficiently. Salol and beta-naphthol should be given as intestinal antiseptics to check putrefaction and relieve flatulence. For the latter, in mild cases, 20 grains of bicarbonate of soda after food will often suffice. Two to four drachms of castor oil may be administered when much pain occurs, with a passage of mucus ; the latter being a sign of active disease, no improvement is to

be hoped for until all the affected membrane is extruded.

Great care should be taken to prevent patients catching a chill on change of weather ; in fact, an outburst of symptoms is invariably to be expected under these conditions. Sprue patients are often hurried on board ship for a change, quite regardless of the time of their arrival in England, which should, if possible, be summer. If not, they must be warned with respect to this fact.

**Enteric Fever.**—This, as a rule, occurs only in sporadic cases, infection having occurred prior to embarkation, unless, of course, some common source of infection is present on board. Calomel in small doses and liquor hydrarg. perchlor. (ʒss. three times a day) have proved very beneficial in the author's practice where the stools have been 'livery.' The great difficulty in enteric cases is the want of adequate nursing, etc., otherwise there is little to remark upon the treatment. They should, of course, be isolated and landed at the earliest opportunity.

**Fractures of Lower Extremity.**—When the limb has been set and put in splints, it should always be suspended in a canvas sling, free to swing. The sling can be fixed to a screw put in the deck overhead, or if the patient occupy a lower berth, which is desirable, and should be arranged if possible, it can be suspended from the frame of the one above.

**Cutaneous Affections.**—*Burns.*—For superficial burns, the old-established carron oil is the best dressing, and if applied early gives great relief. A few drops of oil of eucalyptus may be added to the mixture as antiseptic and preservative. Unless the blisters are large, they should not be tapped, but allowed to reabsorb ; if they



are accidentally ruptured, ung. zinci or zinc oxide lightly dusted over and covered with a bandage is the simplest dressing.

*Prickly Heat*.—An urticarial or erythematous rash, not unlike that of measles, with a varied distribution and intense irritation. It is more commonly situated on the body and neck than on the extremities, very rarely on the face. Eruption takes place shortly after entering the hot weather, and subsides again in cold weather, occasionally by desquamation. In bad cases there may be slight pyrexia and constitutional disturbance. The irritation is intense, worse at night, and infants are very liable to it. The etiology and pathology are obscure, and treatment unsatisfactory. It is most probably a modified miliaria, being most common on parts subjected to pressure, such as round the hips, where a belt presses, and causes more activity of the sweat-glands.

Manson's dusting-powder, a mixture of starch, zinc, oxide, and boracic acid, may be tried, or carbolized glycerine (1 in 20). Some authors advise careful dieting, avoidance of sea-water baths, etc., although the result is scarcely worth the extra trouble it entails, except in very severe cases. That sea-water is not the only cause is proved by the fact that prickly heat is common up country in the tropical latitudes.

*Pediculi*.—The writer is strongly convinced that the radical cure lies in shaving the parts, as mercurials do not destroy the nits or embryos, and reinfection is almost certain to take place from the clothes previously worn, unless it is possible to bake them. This, under favourable conditions, and with the consent of the chief engineer, may be done by hanging them over the 'boiler tops' for a day. Recently the use of essential

oils was advocated as being just as effective and safer than a free use of mercurials, although, in the writer's opinion, it does not give such sure results. The seats of lavatories should always be thoroughly scrubbed down daily with strong commercial carbolic acid, to prevent further spreading.

*Impetigo*.—The most satisfactory method of treatment is to thoroughly remove all scales and crusts with wadding, soft-soap, and warm water, obtaining a clean surface. Ung. hydrarg. ammon. is next well rubbed in; two or three applications night and morning will, as a rule, suffice. When it occurs among children in a crowded steerage, parents must be directed to keep them away from the others, or an outcry will be made as soon as the condition spreads amongst the rest.

*Dhobie Itch*.—Said to be acquired from clothing washed by dirty natives. The truth of this is not apparent. It resembles ringworm, and is probably one of that class of fungi. In appearance it consists of red raised and glazed patches with a regular festooned margin, slightly scaly at the extreme edge. It is generally situated high up on the inner side of the thighs, occasionally on the scrotum and axillæ (Manson). Irritation is great, being worse at night-time. If unchecked, it tends to spread, very slowly, and always with a margin like a festoon of garlands.

One method of treatment is the application of liq. plumbi subacetatis fort., with a little tinct. opii on lint. At first smarting is intense, but gradually passes off. A 'Dutch wife,' which is a cane cylinder covered with cloth and placed between the knees, or a hard pillow, will serve to separate the parts during the night. In fact, while in the tropics, its use is very pleasant, quite regardless of any necessity for it. All contiguous and

moist surfaces should be kept scrupulously clean and lightly dusted with zinc and rice powder at all times as a prophylactic.

*Boils.*—A very useful method of treating this not uncommon condition is by means of free purgation with Epsom salts mixed with ship's lime-juice, 1 drachm to the ounce, diluted with the requisite amount of water, twice daily. Meat should be restricted, and if there is much debility, tonics, such as cinchona and alcohol (ʒiv. per diem), will be of service. If seen early—that is, before suppuration takes place—they can sometimes be aborted by thoroughly cleansing the surrounding skin with perchloride solution (1 in 2,000), or carbolic (1 in 40), and then painting over with iodine. Another method is to drill a hole in the centre with a clean, sharp, wooden match dipped in carbolic (1 in 10).

The best method is the continuous application of compresses of rectified spirit under oil-silk, and kept moist for twenty-four or thirty-six hours, the surrounding skin being well cleansed with ether, carbolic (1 in 40), and finally smeared with ung. boracis. They should never be poulticed or incised. When suppuration has occurred—and that is the time they usually come to the surgery—the thick central, greenish slough should be removed with forceps, and the cavity freely irrigated with boracic acid (grs. vi. ad ʒi.), two or three times a day for the first few days, until it becomes clean, lightly plugged with gauze, and then allowed to granulate up from the bottom. If a large cavity exist, it may be freely laid up by radiating incisions, with point of scalpel cutting from within outwards, and scraped so as to prevent pus being locked up and delaying healing.

**Fireman's Cramp.**—This ailment, although not often very severe, is somewhat alarming when seen for the



first time. It is a state of cramp affecting the extremities and abdominal muscles of firemen, who, while below or when coming off watch, in a great state of heat, have drunk a quantity of iced water, or stood under a windsail, or ventilator, to get cool. The patient is generally found writhing and groaning on the deck, with extremities flexed, hard, and rigid. At first sight the appearance is not unlike that of a case of strychnine poisoning.

Treatment consists of sharp friction of affected parts, with some stimulating liniment, such as lin. camph. ammon., and the internal administration of tinct. chloroformi et morphinæ co. (℥x.), repeated in ten minutes when indicated. If readily obtained, a bath at 108° F. affords relief. Cold affusion should be applied with caution, owing to the danger of additional shock, the body being already probably overheated.

A similar condition is occasionally met with in the tropics when a passenger, being heated in some sport or deck-game, has had a 'long iced drink.'

Shipping druggists supply what they call 'Fireman's Cramp Mixture,' apparently composed of æther, spir. ammon. aromat., and chloroform. An effective cramp mixture is made as follows, and should be kept in the engine-room by the engineer of the watch, so as to avoid sending for the surgeon every time a man has cramp :

R	Spir. æther	} āā ʒss.
	Spir. chloroform.	
	Spir. ammon. aromat.)	
	Tinct. capsici, ℥x.	
	Aquam, ad ʒi.	

To be taken as required, and repeated in fifteen minutes if necessary.

A good substitute for tinct. capsici, which is not officially carried, can be made by macerating 2 drachms of cayenne pepper in 4 ounces of rectified spirit, diluted to 70 per cent., for a week, filtering, and expressing the residual mass. Dose, up to 20 minims.

Many cases of cramp can be directly attributed to the practice of keeping iced water down in the engine-room and stokehold for the men to drink, when on watch, while the ship is in the tropics. It is in these latitudes that the incidence of cramp cases is greatest, very few occurring in colder weather. It is practically impossible to stop men drinking iced water to excess, when in a state of heat down below, and the best method of diminishing it is to supply instead a concoction of oatmeal-water and lime-juice, kept at a temperature of about 50° F. in a felt-covered receptacle. Such a mixture, although nourishing, is sufficiently insipid to prevent men drinking it in any large quantity, which is what is required, as it would be almost inhuman to deny them any liquid at all.

Another custom, when in hot weather, which has obtained almost from time immemorial, is that of allowing each man a 'tot' of rum per watch, to be drunk while down below. The absolute wisdom of such a practice is not at all apparent, but if carried out, the rum ought only to be served after a man has finished his spell, not during the performance of it. The stimulating effect soon passes off, leaving him listless and slack for the rest of the time. Many will resort to all sorts of tricks in order to obtain a double allowance.

Lascars very rarely drink water on watch, being content simply to rinse their mouths out with it. In consequence, cases of cramp are comparatively rare amongst them. They, too, never have rum.

Oatmeal-water can be made by soaking 2 ounces of the meal, enclosed in a muslin bag, to the pint of water, adding lime-juice—the ordinary fortified ship variety—in the proportion of 3 ounces to each pint. The meal can be used three or four times over before being thrown away.

**Sunstroke**, or **heat-stroke**, to be more accurate, is the result of more or less prolonged exposure to the sun or a high temperature, such as engine-room, etc. There are two separate conditions resulting thereby, and as the treatment of either is diametrically opposed to the other, the diagnosis between 'heat apoplexy' and 'heat exhaustion' is very important.

**Heat Apoplexy**, or **Siriasis**, is a disturbance of the thermotaxic centre, leading to a state of high pyrexia—'thermic fever.' Probably there is some chemical change in the choline compounds. In these cases the patient succumbs gradually at his work, finally becoming unconscious. The pulse is hard, rapid, and bounding, face congested and cyanotic, breathing stertorous and labouring, and the pupils contracted, reacting sluggishly to light. The rectal temperature will vary from  $106^{\circ}$  upwards. Irregular convulsions are occasionally met with. The treatment consists of immediate removal to a cool place, and loosening all clothing. It is better to remove it entirely by cutting it away. The next step is to swathe the whole body in crushed ice, and, if feasible, shaving the head. This having been done, venesection to 10 ounces or more, and intravenous injection of same volume of normal saline should be performed. These latter measures are often resorted to too late: as the state is undoubtedly one of toxæmia, probably from the change undergone by the choline compounds, it requires immediate and energetic



measures. While this is being done, bystanders must be directed to massage the body sharply, so as to bring the overheated blood to the surface. When the temperature has commenced to fall, which it does slowly, it must not be reduced below  $101^{\circ}$  for fear of syncope. At this level ice, etc., should be stopped, and the patient lightly covered with a dry sheet. The temperature must be continually watched, and is best taken in the rectum. As soon as cold affusion, etc., is stopped, the temperature will probably bound up again, and must be carefully reduced by the same measures. Antipyretics are practically useless, and must not be administered. When the pyrexia has subsided and the patient recovered, he should be kept in bed for at least a week, as meningitis is not an uncommon complication. There is little fever, as a rule, if this should happen, and the most marked symptoms are violent headache, accentuated by slightest movement, and pain in the eyes. The best treatment is venesection, and ice to head and spine, and absolute rest, with light but nourishing feeding. The patient having recovered, he should be warned as to his mode of living, avoiding exposure to heat and use of alcohol. Alcohol in these cases acts like in those of concussion, and must be forbidden, absolutely and entirely.

**Heat Exhaustion.**—This is more a form of syncope and cerebral anæmia. The patient succumbs suddenly, is pale, clammy, and collapsed; pulse thin, thready, and rapid; pupils, as a rule, dilated; breathing is shallow and quiet; temperature is generally subnormal or slightly raised; and consciousness may be absent. Treatment is a complete converse to that of apoplexy—namely, raising the temperature by external heat, applied by wringing blankets out of hot water, and

wrapping patient up, or hot bottles to extremities, etc. The head should be kept low. If possible, the best method is to immerse him in a bath at 110° F., taking care when applying heat, however, that the patient is not burned, as, if unconscious, he is unable to give warning.

‘ Just here, however, must be uttered a word of warning—namely, that the mere fact that the skin is cold does not prove the case to be one of heat-exhaustion, since a rectal thermometer may show the central or real temperature of the body to be that of hyperpyrexia ’ (‘ Text-book of Practical Therapeutics,’ by Hobart Hare, M.D.).

Cold, if used, must be applied very cautiously. Meningitis is not a common sequela, but convalescence is slow and prolonged. Good food and tonics should be ordered.

‘ **Cold.**’—At the outset it may be stated that there is no common ailment so resistant to treatment at sea, as a common household cold, especially if acquired on board. Moreover, at sea people will worry about a cold and want treatment, which at home they would otherwise neglect, simply allowing it to run a natural course. A ship is always draughty, both on deck and below ; an equable temperature cannot be maintained. Further, in tropical latitudes the usual homely remedy of diaphoresis is impossible, owing to continual state of perspiration common to all on board. With much nasal catarrh, douches of boracic acid, soda bicarb., or glyco-thymoline may be used, or inhalations of eucalyptus oil. Preferably the ‘ cold ’ should be allowed to exhaust itself. If people wish for medicine, some nauseous mixture of nitrate of potash, spirits æther : nitrosi may serve to satisfy them, without, however, curing the cold.

While on the subject of cold, mention must be made of the electric fans placed in passengers' cabins. To those unaccustomed to them, their use is often a source of danger, the ill-effects varying from neuralgia, sciatica, facial paralysis, to acute enteritis, which may terminate fatally. Fans are fitted in cabins for the purpose of circulating the air, and not to cause a cooling draught to impinge upon the sleeper while in his berth, however pleasant it may seem. During sleep total relaxation of the body occurs, and the result of a continuous current upon one particular skin area must be quite obvious upon slightest consideration. The surgeon cannot impress this fact too much on passengers, although in most instances he will be laughed at for his pains as an old croaker, until some marked case of facial paralysis, etc., arises to vindicate him, and, at the same time, probably to discontinue the use of fans generally for the rest of the voyage.

The above remarks apply also to the tin wind-scoops fixed to the ports. When used, a towel should be hung up in front of them to break the stream and ventilate the cabin simultaneously by acting as a small punkah.

**Insomnia.**—This is not an uncommon complaint among passengers, particularly so as many of them have been sent to sea for a change of scene and climate on account of it. Everything is strange, and the unusual and unavoidable noises of a ship at sea seem at times to aggravate the trouble. Many will come provided with the newest hypnotics in tabloid, pill, or powder, the names of most of them ending in 'al.' In spite of them all, no drug yields such uniformly good results as paraldehyde. Its nauseous taste and odour are, of course, greatly objected to, but can be minimized by



suitable vehicles. The advantages, in cases of simple insomnia without pain or mental disturbance, are rapidity of action, uniform dosage—a drachm will generally suffice, and need not be increased—and entire absence of heaviness or lassitude the next morning after a night of wholesome, refreshing sleep. Its drawbacks are that it is ineffective where pain is the cause ; its elimination by the breath for about twenty-four hours after ; and the occasional vomiting and profuse perspiration which follow on its administration. The writer gives it in the following prescription :

R Paraldehyde	..	..	..	̄i.
Tincture aurant.	..	..	..	̄ii.
Syrup or glycerine	..	..	..	̄i.
Aquam	..	..	..	ad ̄jiss.

To be taken at bedtime.

It can, if indicated, be combined with bromide of potassium, ̄ss.

**Menstrual Disorders.**—Now and again patients will be found in whom the catamenial functions at sea undergo a change as to frequency and duration, and in most cases with increase of pain. The flow, as a rule, comes on about every fourteen days, lasts longer, and is more profuse than customary. What this is due to is uncertain at present.

Treatment consists of rest in bed, careful purgation, and the administration of ergot and iron three times a day. Quinine should not be given, even in combination with iron, as in ‘scale preparations,’ owing to its stimulating effect on the uterine muscle, and tendency to cause menorrhagia. For severe pain, hot applications locally and phenacetin (grs. vii.ss.) every four hours may be tried. Where a malarial infection occurs in the

same case, it must be treated with phenacetin or arsenic, and not by quinine, for reasons above mentioned. If quinine is indicated, owing to symptoms not yielding to other measures, it must be given with great care in small repeated doses.

**Debility and Exhaustion.**—During and after the passage of the vessel through the tropics, a large number of passengers will complain of nerves and being generally run down. The symptoms are anorexia and thirst, œdema of feet and ankles, diminution of urine, and general malaise. The œdema of feet is soft and easily controlled by pressure, disappearing with the advent of cooler weather. The feet should be kept raised as much as possible, and bathed twice or three times a day with ordinary sea-water, and lightly bandaged if indicated. As to diminution of urine, that is explained by the hyperactivity of the skin, and which, if very great, may lead to 'clogging' of the kidneys with mild uræmic symptoms, headache, malaise. A dose of gin diluted with tonic water (solution of quinine, 1 grain, in a pint of sweetened aerated water) once or twice a week is the best and pleasantest form of diuretic.

When the cold weather comes on, polyuria sets in, and people get very alarmed at what they take to be symptoms of diabetes and Bright's disease until reassured that it is only a natural reactionary phenomenon. A useful tonic solution is made as follows :

R	Quin. sulph.	..	..	gr. i.
	Acid. sulph. dil.	..	..	℥ x.
	Tinct. nucis vom.	..	..	℥ v.
	Tinct. rhei	..	..	ʒi. ss.
	Syrup	..	..	ʒi. ss.
	Aq.	..	..	ad ʒss.

To be taken three times a day before food.

Or—

R	Liq. strych.	..	..	..	℥ ii.ss.
	Acid. phosph. dil.	..	..	..	℥ xv.
	Tinct. card. co...	..	..	..	℥ xx.
	Sp. chloroformi..	..	..	..	℥ xx.
	Aq.	..	..	..	ad ̄ss.

A concentrated stock of this solution should be made up, as it will save time on a full voyage, when nearly everyone demands 'a tonic.' Where possible, the writer discourages the idea of medicine for these cases, urging that the cool weather will soon set everything right. Some, however, for want of something to occupy their minds, are very apt to become introspective and miserable, and will soon rush off to see the doctor. And woe to him if no *placebo* be forthcoming! The 'tonic solution' is certainly not without virtue, and is, at the same time, sufficiently nasty to duly impress patients with its powers.

**Glaucoma.**—While at sea three cases of acute glaucoma have occurred to the author, the first, fortunately, within two days of reaching port, where an operation was immediately performed on landing the case directly after arrival. Eserine tabloids should always be carried for an emergency. Failing these, and the assistance of an ophthalmic surgeon within a reasonable time, the eyeball should be punctured. It can be done under cocain, with a hypodermic needle inserted far back in the sclerotic, near the outer canthus, and the intra-ocular tension thereby relieved, as an iridectomy is not lightly to be undertaken by one unskilled in its performance, however easy the descriptions of such emergency operation may read. Massage of the eyeball is also a useful measure, but must be gently carried out on account of the acute pain in these cases.



The time devoted to keeping a careful record of cases, not necessarily for official report, is well spent, and does not take more than fifteen minutes a day at the outside, if regularly entered up. A specimen of ruling is given in the Appendix, and the author strongly advises readers to do this, affording as it does a pleasant record of past successes, not to mention failures. At the same time, a clear history of the progress or decline of the case is furnished in the event of a subsequent demand for details.

In conclusion, the surgeon cannot fail to be impressed by the marked benefit, in suitable cases, derived from the *vis medicatrix naturæ* at sea. Surgical cases do exceedingly well; suppuration, when it occurs, yields very readily to the simplest antiseptic treatment; in fact, there is a tendency for a man to grow careless in his methods of surgical cleanliness. Medical cases also do well, as a rule, although, owing to a certain number of unsuitable ones finding their way on board, the total beneficial results are not so great as might be expected.

## CHAPTER XII

### SHIPS AS CONVALESCENT INSTITUTIONS

It is not a matter to be dealt with lightly or haphazard, sending a patient off to sea for a voyage, unless there is every reason to believe that he or she will be greatly benefited thereby. In all cases he is subjected to a heavy expense, which with some is ill afforded, and entailing much subsequent economy. The sending of unsuitable cases, or those beyond all hope of beneficial result, to sea is much to be deplored, and does not redound to the credit of the profession. For the guidance of the non-seagoing reader, the writer proposes to mention briefly—it is impossible to lay down fixed rules—the main facts connected with sending patients to sea.

Primarily, it may be stated that the beneficial results of a sea trip are not, as a rule, apparent until the patient has left the ship and returned to his usual mode of living.

In connection with a sea voyage taken for health, the following points are to be observed :

1. Clothing and outfit required.
2. Type of ship and cabin selected.
3. Duration of the voyage, length of time between ports, and life lead at sea.
4. Climatic and thermal changes likely to occur during the voyage.
5. Type of case sent.

**Outfit, etc.**—Medical men sending patients to sea are sure to be consulted on the subject of what clothing must be taken. For outside clothes, both winter and summer things ought to be provided, as changes of climate are experienced on nearly every run. The ordinary light flannel suiting is almost the best for hot weather, as drill, in the first place, is not so cool as it looks, and, if white, soon shows dirt, therefore requiring a number of suits to last while the vessel is in the tropics. Khaki-coloured drill can be worn if preferred. For colder weather a medium weight 'tweed' is as good as anything.

Thin flannel, or cellular, soft-fronted shirts are the most comfortable of all for wear in the daytime, and with them can be worn the flannel double collar lately in vogue. Owing to the national conservatism of British ship-owners, laundries are not yet generally fitted even in the more modern mail-boats, as in German ships. Therefore, the stock of linen which must be taken away to sea is considerably greater than it really ought to be. A good estimate of the quantity required can be obtained by providing the weekly amount, multiplied by the number of weeks likely to be spent at sea before reaching the terminal port. To be on the safe side, an extra weeks supply should be taken, as one cannot rely on getting washing done at foreign intermediate ports of call. In order to economize space and excess luggage bills, underwear should be of medium weight and thickness, suitable for any climate, additional warmth in very cold weather being obtained by putting on two of each article if necessary.

A tweed cap, which fits closely, is the most convenient form of headgear for cold weather; in warm latitudes, one is better without anything, under cover, of course.



A solar topee is bulky to carry about, but should always be worn when ashore for the day in the tropics ; as mentioned elsewhere, it is better to buy it locally.

There are four items indispensable for the proper enjoyment and comfort of a sea voyage—a warm travelling-rug, an overcoat, a cheap portable folding table, and a deck-chair with pillows. The table is very useful for writing or playing cards, etc., on deck, and can be lashed to the chair when leaving the ship. A plain deal one is best, and should not be too expensive. As to the chair, even on such an apparently trivial and obvious subject there is much to be said. Some chairs are very comfortable, others are decidedly the reverse, and it is not until some time has been spent sitting in one, that its qualities for comfort or discomfort are fully realized. The writer has a decided preference for the ordinary canvas folding-chair, fitted with arm-rests and a detachable foot-rest. There should be a central guard-piece, slotted to engage with the adjusting crossbar, to prevent it slipping, and the chair should have a width of at least 24 inches—more for a stout person—as a narrow canvas chair is apt to press uncomfortably where the body touches its framework. On the other hand, there are many who prefer the square type of cane chair, with side-pockets, foot-rest, and adjustable back, as it makes a very comfortable bed if the owner wishes to sleep on deck. The great objection to this kind of chair is its size and liability to damage when transhipped, etc. Then, again, there is what, for want of a better term, might be called the ‘selfish chair’—all cane, long, permitting the occupant to lie down more or less flat. It takes up much deck-space, is a source of annoyance to other passengers, and also to its owner, when moving about from place to place. Pillows should be down-

filled, not kapoc ; the latter filling soon gets hard and lumpy. An air-pillow is very useful and portable.

With regard to sleeping on deck in hot weather, that, like everything else, has its drawbacks, which are short and broken rest, and a hard bed-place, because, as a rule, passengers are not allowed to ' turn in ' on deck before 11 p.m. or after 5 a.m., when the decks are washed down, compelling a change of camping-ground in the early hours of the morning. The main objection, however, is the heavy dew almost invariably present in the atmosphere during the tropical night. On some occasions the decks are quite wet with moisture, even under shelter of a deck above. This risk to the patient, of catching colds or chills under these circumstances should always be remembered when consulted on this matter. If passengers elect to sleep on deck, they should be told to wrap a blanket right round the middle of the body, keeping it in place by means of an ordinary belt. Then, however much they turn and roll about during the night, the abdomen and loins are always covered. Old residents in tropical climates will confirm this statement, which is one of the first things a new-comer is told on his arrival in the country.

Reading matter need not be extensively provided before leaving home, as at most colonial ports a paper-covered edition of the latest novel can usually be bought at half the cost. The colonial edition appears almost simultaneously with the home one. Ship's libraries vary greatly. In some ships they are kept up to date with recent novels, etc. ; in others, unfortunately, this is not the case, and only copies of standard authors will be found, such as Scott, Dickens, and Thackeray, which few care about reading at sea. For the homeward voyage—viâ the Red Sea especially, where there



are many ports of call—private copies of newspapers, etc., are always very welcome. One of the best to send is the weekly colonial edition of the *Daily Graphic* or the *Weekly Times*.

If the patient be musical and perform on any instrument, he should be advised to take it with him, as it will tend to relieve the monotony, and give him some occupation in playing at concerts, etc., for the amusement of himself and others. A valuable violin or similar instrument is, however, better left at home, as the sea atmosphere exerts a deleterious effect upon them as a rule.

**Type of Ship and Cabin Selected.**—As the ultimate success of a health-seeking voyage is materially affected by the class of ship and cabin selected, especially so in 'nervous cases,' some considerable judgment is required before finally settling this matter. A nervous case should never be sent away in a crowded ship; there are too many distractions and diversions for the patient to obtain complete rest and quiet. Dances, noises of deck-games, and children, are all undesirable. The latter are always present on board in full force during a busy season voyage, and generally get in the way of everybody, particularly the invalid, making life a burden to him. Very few ships have a place set aside for children, beyond a nursery saloon for meals, and nothing short of actual sea-sickness will keep them quiet on board. Then, again, in a full ship there is always some person or other, of an inquisitive sympathetic turn of mind, who will come and discuss symptoms or tender advice, much to the patient's distress. For an absolute rest-cure the Cape route to Australia or a sailing-ship are best, because the 'slack voyage' through the Red Sea means the monsoon, which will be dis-



cussed later. The Cape route and sailing-ship possess the advantage of putting the patient completely out of touch with the rest of the world; latest telegrams, tape prices, etc., cannot be received. Further, if Australia or New Zealand be the foreign terminal destination, as is usually the case, then, by travelling round the Cape, it is possible to find letters from home awaiting the patient on his arrival out there. Cheerful home news always exerts a beneficial influence upon those exiled for their health. If, however, a bright, cheery time, with plenty of amusement, is indicated, then a popular mail-boat should be selected, the fuller and larger she is the better.

In choosing a berth for an invalid, the great essential is to reserve a whole cabin, if possible. Most companies will let a cabin to one person on payment of about 50 or 60 per cent. of the berth-value—*i.e.*, a three-berth cabin for one and a half or two fares. Single berth cabins, as a rule, are small, and not well adapted to the requirements of a sick person, especially if there is any possibility of him being compelled to remain in bed at odd times.

The situation of the cabin has next to be considered, and, as all berthing plans are misleading to the uninitiated or inexperienced, it is not always easy to make a happy choice. If it can be managed, the ship should be visited in dock before finally settling upon any particular cabin, preferably when she is in dock the voyage previous to the one fixed on. Even then, a ship in dock presents a totally different aspect to when she is in commission—sea noises are suppressed, and traffic on board, to and fro, conspicuously absent. The points to look to in selecting a cabin are position, privacy, light, and ventilation, freedom from noise, either overhead

or outside, as caused by traffic, deck-games, hatchways, coal-bunkers and pantries, etc.

As ships vary so much in the design of their internal accommodation, it would be invidious not to say, futile, to state here definitely where an invalid should be berthed. Therefore, with a view to giving the reader some idea of cabins in general, the advantages and disadvantages of various situations will be briefly and broadly mentioned, leaving the ultimate choice to him.

For a voyage to Australia or the Far East, a cabin on the left, or port, side of the ship is to be preferred, as that side is not exposed to the sun's rays, which heat up the frame-plates considerably, much after the middle of the morning; consequently the cabin is cooler during the afternoon and night than one on the starboard, or right, side, which latter has had the sun on it during the greater part of the day. For the homeward voyage naturally the order is just reversed.

The advantages of an outside cabin over an inside one are daylight and a port, which, under favourable conditions of the weather, can be kept open day and night, and, in addition, have a windsail or tin wind-scoop fixed into it, thus insuring a supply of fresh air. On the other hand, the drawbacks are noise of the sea or condenser discharge, which may keep a patient awake, and also in bad weather the ports must be kept closed, and ventilation at once very much reduced; whereas, in an inside cabin—that is, in modern-built ships—ventilation is generally obtained by means of vertical shafts leading right up to the upper deck, which need never be closed down except during a rain-squall. Broadly speaking, an inside cabin is quieter than an outside one, and also cooler, provided it is not near

boiler-spaces, though, of course, it is more gloomy, owing to absence of daylight. Reverting to the other side of the locality of cabins, naturally a cabin situated near the centre of the ship will feel less motion than one at either end ; also a cabin at the forward end will be more or less free from vibration compared with one aft. Yet, again, there is the question of a ' deck cabin,' or one on the main or spar decks. The advantages of the former are more air and light, as they are usually fitted with square windows instead of the customary circular ports. The windows, too, can be kept open practically in all weathers. In this case, the drawbacks are noise of deck-games and people walking and talking outside, sometimes till late at night, and also the increase of motion during a roll, owing to the additional height above the water-line. A ship in the water is, to all intents and purposes, like a vertical needle on a horizontal axis, and obeys the same laws of deflection. Further, a deck-cabin does not obtain the same privacy as one down below ; the door, if it leads on to the deck directly, must be kept closed instead of the curtain, always supplied, being just pulled across the entrance. Proximity to hatchways, coal-bunkers, pantries, galleys, etc., should be carefully avoided, as the noise therefrom is most annoying, and generally incessant. As previously mentioned, when booking berths, all these facts should be carefully inquired into, as naturally a bunker or other drawback will not figure as such in the berthing-plan.

**Duration of the Voyage**—For convalescent medical and surgical cases nothing is so good as a short sea-trip in a well-filled passenger-ship, where good living, genial company, and amusement are valuable auxiliaries to the healing powers of sea-air. The Orient Steam Navi-



gation Company issues a return fare, at a reduced rate, from London to Marseilles. One night is spent at the latter port waiting for the homeward-bound ship, and the whole trip lasts fourteen days. A great point about this particular voyage is the absence of much change in temperature—certainly during the winter months—thus doing away with the necessity of a large and varied assortment of apparel. If preferred, a passage in one of this company's cruising yachts may be booked. From London or Southampton to Madeira and back by the Union-Castle Line is equally good, although the thermometer rises as the islands are approached. A longer voyage can be obtained by a run out to the West Indies in the Royal Mail ships. There are numerous lines taking passengers on voyages suitable for convalescents, and it would serve no purpose to enumerate them. For cases other than surgical, or those recovering from an acute medical complaint, exanthems, influenza, etc., no voyage of less than two months' duration is of much use as a permanent cure.

**Length of Time between Ports of Call.**—This is a factor of considerable importance in cases of 'nervous breakdown.' Nothing is so irritating to some cases of this type as the hum-drum monotony of day after day at sea, with no change of scene or life to give an interest to the mind. Nerves are all on edge, tempers short, and fellow-passengers pall on the sufferer. If insomnia be one of his troubles, life is scarcely worth living. For this reason the Red Sea route is preferable to that by the Cape, if Australasia, as is usually the case, be the final destination.

By this route the longest runs are from Suez or Aden to Colombo, and from thence to Fremantle, the latter occupying ten days, with nothing of interest to relieve

the tedium. It is, indeed, rare to sight even another ship, and in this stage of the journey even passengers who are well, almost invariably get grumbling and restive. Viâ the Cape are two long stretches, Teneriffe to Cape Town taking about sixteen or seventeen days, and that from Cape Town to Fremantle or Albany averages eighteen days or upwards. From Avonmouth (Bristol) to Jamaica is about thirteen days, and makes a pleasant run. The round voyage in the New Zealand steamers belonging to the New Zealand Shipping Company or Shaw, Saville and Company occupies five months: rounding the Cape of Good Hope outwards and Cape Horn homewards. There are, however, few ports of call apart from those in New Zealand. A voyage to India is not very desirable from an invalid's point of view, also the Western Ocean run to the States or Canada. On the latter the trip is too short, and, at the same time, too hurried and full of bustle.

**The Life led by a Patient on Board Ship.**—All patients sent for a voyage must be strongly urged to avoid excess of any kind in the way of eating, drinking, card-playing, etc., living out on deck as much as possible, even in bad weather. Enough exercise should be taken daily, in the form of ten minutes' dumb-bells, if indicated, night and morning, and sharp walks up and down the deck. The walks should be taken at intervals during the day, and the length of each spell carefully regulated by the ship's surgeon. A short walk before breakfast, attired in 'flannels' and a sweater, bare-footed, followed by ten minutes dumb-bells and a sea-water bath, is most invigorating, leading to a thorough enjoyment of a hearty meal. A few turns round the deck last thing at night before 'turning in,' are the best and safest form of hypnotic. Early hours

both as to rising and retiring, should be kept. The diet, too, should be carefully considered and confined, more or less, to plain 'roast and boiled,' as the menu of a modern liner is drawn up to meet the demands of the healthy passenger and gourmet, not the invalid. The subject of constipation has been mentioned elsewhere, and need not be discussed here, except to emphasize the importance of this matter.

Patients, especially young adults, must be warned against being drawn into a set of card-players, who will play morning, noon, and far on in to the night, in the stuffy atmosphere of the smoke-room, smoking most of the time, and probably drinking more than is healthy or wise for them. The subject of alcohol at sea has been fully discussed in a former chapter in regard to ship-surgeons, and the same remarks are applicable to passenger-patients. There is no objection to patients having their whisky-and-soda at meal-times, or last thing at night, but 'gin-and-bitters' and promiscuous 'pegs' at odd hours of the day are to be strictly prohibited. Beer, unless the light draught lager, is not a suitable drink at sea, generally speaking, it being too 'liverish,' particularly so in the tropics. Moreover, in order to stand a sea-voyage, it has to be fortified, and contains more than the usual amount of alcohol. Most ships have a wine-bin stocked with wholesome and suitable brands, although some brands of Australian wines leave much to be desired on the score of wholesomeness, being somewhat highly fortified, and conducive to headaches, etc. Mineral waters are carried in infinite variety, and the best form of drink in the hot weather is a 'gin-and-tonic' occasionally; it is a good diuretic and pick-me-up. The taste thereof is, however, somewhat of an acquired one; many dis-



like it at first. Tobacco is bought in bond, and its use should not be allowed to exceed the usual daily amount. At sea, with no fixed occupation, there is a tendency to overindulgence in the fragrant weed.

The whole secret of a successful voyage undertaken for health-giving purposes is temperance in all things, not necessarily abstinence therefrom.

So far no mention has been made of lady patients, as most of the above will apply broadly to members of the gentler sex, alcohol and tobacco being, of course, excepted. The matter of clothing is naturally left to their own discrimination.

**Climatic and Thermal Changes likely to Occur during the Voyage.**—Before sending a patient to sea, some inquiry as to his powers of standing extremes of heat or cold should be made, and the particular route most adapted to them, selected for preference. It is almost inhuman to send a very obese patient for a trip down the Red Sea, say between the months of June and September. His physical discomfort is great, and cannot be minimized very much. Likewise a thin, emaciated person, who feels the cold, and is subject to chilblains, should never be ordered a cold-weather voyage. A ship, however warmed, is really never warm and cosy, without being unhealthily stuffy. With an open grate in the saloon, proximity to it is limited by lack of space and the individual selfishness of human nature. If, on the other hand, it is warmed by steam-pipes, the atmosphere is invariably close and oppressive. The South-West Monsoon, which blows in the Indian Ocean between May and September, makes the passage trying, even to those in robust health, while invalids are always worse for the time being, finding life unbearable. During this period the atmosphere is close and muggy, being

heavily charged with moisture ; the wind is warm and enervating ; tropical rain-storms occurring at intervals. In addition to this, if travelling westwards, the ship gets the full effect of wind and sea almost direct ahead, or slightly on the port bow, which, in some cases, produces sea-sickness as an additional discomfort. In the Red Sea the thermometer ranges between 60° and 90° F., according to the time of year. June to September are generally acknowledged to be the worst months in this part, and during that time there are two or three days in each voyage which are excessively hot. Nowadays, owing, no doubt, to the improved design of ships, fatal cases of heat apoplexy are not as common as formerly, when four, five, or six deaths occurred while in this region. During the winter months it is occasionally quite cool, considering the latitude. In the Suez Canal, the nights are often distinctly cold. The writer has experienced a hail-storm in March in the Gulf of Suez. On the mail run to Australia or the East, twelve to twenty days of hot weather must be expected, according to time of year. Viâ the Cape of Good Hope there is not much hot weather—five or six days at the most—while the ship is actually within the tropical latitudes ; the rest of the voyage is in cool, and sometimes very cold, weather. After leaving the Cape and heading for Australia in the southern latitudes—‘running the easting down,’ as it is technically termed—extremely cold weather is met with, icebergs not uncommonly being sighted. The return voyage round Cape Horn, too, is cold, until Monte Video or Rio de Janeiro are reached. The Mediterranean is not always what would be expected in the way of warmth ; there are times and places in which it is exceedingly cold, such as the Gulf of Lyons,

off the Cretan coast, and even as far south as Port Said. Atlantic weather is sufficiently well known to require any comment. Briefly, if Australia be the destination, and a warm run required, then the mail route should be selected; for cool or cold weather the Cape route is better. The best time of year to send a patient out by the Red Sea is between October and February, returning to England late in May. For obvious reasons, the monsoon voyage—*i.e.*, leaving England between April and August—is better avoided. Early autumn is also the best time for the Cape route, as the extreme cold in the southern hemisphere is thereby escaped. Invalids returning *viâ* the Canal, are often eager to disembark at Marseilles, making their way home overland, saving about a week. This should not be countenanced, as the week's run from Marseilles to Plymouth or London acts as a bracing tonic after the relaxation of the tropics. Moreover, the journey overland, unless taken in easy stages, is very trying. All mention of rough or bad weather at sea has been purposely omitted, as, in the writer's opinion, it is absolutely impossible to foretell or calculate upon what the state of the sea will be like in any particular locality until one arrives there, quite regardless of its bad reputation. Several times the Bay of Biscay has turned out to be the smoothest part of a voyage from London to Port Said, etc.

**Types of Cases Sent to Sea.**—The last, and by no means least important, section of this chapter must be considered from every point of view, in order that the patient may not only receive every possible benefit from the voyage, but may also be spared an unnecessary or unsuitable one. Here, again, it is absolutely impossible to be dogmatic, and lay down definite ruling.



Cases either will or will not do well at sea. Certain cases, by experience, always improve ; others get worse ; and there is yet a third class which may be termed the doubtful ones. It is in the latter that much judgment is required, and no one can foretell what the result will be, therefore they should not be sent off without due consideration. With every mental reservation and wish not to be arbitrary, the author proposes to mention broadly, on the merits of his own experience and that of fellow ship-surgeons, the type of case likely to receive benefit from a voyage. Post-operation surgical cases always do exceedingly well, even if septic. As mentioned elsewhere, suppuration yields very readily to treatment of the blandest nature. A short voyage of two or three weeks' duration is ample, although, naturally, if a longer one can be obtained, so much the better.

Convalescents after acute illness or exanthems come under the same category as the above. In cases of the latter every reasonable precaution should be taken to prevent infection of others. Some are occasionally met with, in whom the minimum period of quarantine has not elapsed. This is almost a criminal offence, and should be subjected to severe measures, if found out.

After an attack of influenza a sea-trip will often prove a satisfactory tonic. Cardiac cases, functional and organic, as a rule, present no indications for or against a voyage, and generally derive benefit therefrom.

Persons subject to asthma should never be sent as an experiment, and if a voyage is necessary for other reasons, they should always take a supply of their own particular remedy with them. Moreover, other passengers object strongly to the fumes of various anti-asthmatical preparations, which have to be burnt in the cabin, making it unpleasant for the victim.

Osteo-arthritis, rheumatism, and allied pathological conditions are usually aggravated at sea, often in bouts, at irregular intervals, or on change of weather.

Gastritis, or other cases, such as diabetics, requiring careful and delicate diet, should not be sent to sea, because the diet-scale cannot be properly carried out, unless preparations are made before sailing and the owners of the ship communicated with first.

Chronic interstitial nephritis and arterio-sclerosis, if sent to sea, ought to go for a warm voyage, as the hot weather stimulates the sweat-glands, and tends to relieve the strain on the kidneys. These patients are generally more comfortable at sea under these conditions than in England.

Anæmia in young girls must be classed in the list of doubtful cases. Some improve ; in others the disorder appears to be much aggravated. An anæmic patient should never be sent away without first informing her or the relatives of the problematic results.

Menorrhagia is also very doubtful—in fact, might almost be classed among the unsatisfactory list. Patients, before leaving, should be told of this, so that they can make necessary provision.

On no account is a case of chronic pulmonary tuberculosis, that is at all advanced, to be sent to sea. Hæmoptysis seems to be induced ; there is the danger of seasickness in connection with it, and the patient himself as a rule, tends to become very morbid and introspective, the result of well-intentioned but ill-timed sympathy of others on board. If a voyage is necessary for private reasons, then the patient must be judiciously advised as to the ordinary rules of health to be observed. He should bring his own cuspidor, etc. It is a very moot question whether an incipient or early case of phthisis

is much improved, or even arrested, owing to lack of fresh food, and the obstacles to living an open-air life, raised by ship routine and discipline. Incipient cases might be classed as doubtful, and could be sent for a short voyage, tentatively only, with a careful observation of general signs and weight, etc. Diagnosed early cases the writer would prefer to send for sanatorium treatment. If sent to sea, a whole cabin must be reserved.

'Surgical' tuberculosis, joints, etc., is, as a rule, inactive, or improves in cold weather. It might be given a chance, however.

Other types of thoracic disorders, such as 'weak chests,' chronic cough, and bronchitis, are often very much improved by a long sea voyage; but here, again, it is doubtful whether residence in a warm and equable climate would not be as good, if not actually better. Balneology and climatology are such subtle sciences that it is indeed difficult to forecast, with any sense of certainty, the results which will accrue to any one patient in any particular locality.

A dipsomaniac should never be sent to sea unless accompanied, and even then, in a large ship it is practically impossible to prevent him obtaining liquor from some source or other—passengers, stewards, or other members of the crew. At times the ways and means adopted by these cases to obtain liquor are most ingenious. There is no way of restricting alcoholics other than inside four bare walls, under careful and trustworthy attendants. Any measures short of this are certain to be subvented.

The above applies also to victims of drug habits, only with them the source of the evil is more readily got at and restricted. Outsiders, who will procure drink for a man, will not, and cannot, as a rule, obtain the



drug in question. These cases should, where possible, be accompanied, and ought always to be reported to the surgeon on board, so as to prevent further debauches. They should not be sent away until the acute depression, following on the withdrawal of the drug, has passed away, owing to the danger of suicide, etc. The trip ought to be taken more as a finish to the cure.

Persons of eccentric habit or of weak and unsound mind should never be sent to sea 'for a change.' Their presence is a source of perpetual worry to those placed in charge of them, and fellow-passengers will not, as a rule, miss the opportunity of deriving some fun and amusement at their expense and great detriment. The writer cannot express himself too strongly on this point, having seen a large number of weak-minded or eccentric individuals sent for a sea-trip, with not the slightest beneficial result. Further, in some instances, much trouble and expense were caused to the patient and his friends.

Victims of insomnia should try the sea only as a last resource, and a short voyage to begin with as an experiment, there being many little occurrences on a large liner, to militate against undisturbed sleep.

*Neurasthenia and Nervous Debility.*—These form almost the largest number of patients sent to sea, some being undoubtedly much better in mind and body for the change; others, alas! are not, in some instances landing again in England very much worse than when they left, reviling everybody and everything, from the doctor who sent them to the ship which carried them.

The type of case most likely to receive benefit is the overtired and overworked man, leading a busy city or professional life. He should, as a rule, be sent in a full ship, where there will be plenty to amuse and keep

him occupied, distracting his thoughts from his worries. It is the worries that kill, both mind and body. At the same time, he, being but one of many, will not be obliged to take part in whatever is going on if he does not feel inclined. A yachting cruise is an excellent way of going to sea, affording as it does a constant change of life and scenery instead of the well-ordered-run-to-time of a mail-boat. The drawback to a yachting cruise is that most of the time is spent, not at sea, but in port, although the resulting diversions are greater. Here, again, each case must be treated on its own individual merits as regards suitability and the points of the trip.

In two years' active sea-going experience the writer has seen very few good results in 'chronic neurotics' sent to sea as a last hope. No doubt many would have been better had they been sent in what, for want of a better name, might be termed a sea-going sanatorium—that is, a ship solely and entirely devoted to the service of invalids. All the small details, forming such a large factor in the treatment of the sick, cannot be obtained or expected in a ship, whose *raison d'être* is the carriage of passengers, mails, and merchandise. Invalids can only receive very slight consideration under these circumstances, and have to be content with whatever they can get. Although attempts in the past have not been attended with much success—at any rate, of a financial nature—in the writer's opinion, there ought not to be anything to militate against the medical and financial success of such a vessel, if properly organized and managed.

Quite recently a sailing-ship was actually, or intended to be, despatched from England as a combined nautical training college for prospective mercantile marine

officers, sanatorium for consumptives, and dipsomaniacs and also a cargo carrier. Truly a motley mixture, and not one calculated to gain either the confidence or support of members of the medical profession having the welfare of patients at heart. No half-hearted attempt at freight-earning and invalid-carrying combined can ever hope to be a success. It must be all or nothing for gratifying medical results to ensue, and there is no doubt whatever that a ship, specially built and managed on these lines, would be a powerful therapeutic agent for the relief of certain conditions. It would be a strong offensive weapon wielded by the medical fraternity for the benefit of the community.

In a former chapter, dental work was alluded to rather fully. At sea there is something which seems to arouse all the 'pathogenic powers' of dormant carious molars; decayed teeth, hitherto painless, suddenly become active at most inopportune moments. Therefore, to obviate such occurrence, before a patient embarks, his mouth should always be put in complete order some time previously.

At present the general practitioner at home has a hazy sort of idea that a sea-voyage is an excellent restorative. Beyond that, he knows very little, and, what is more, cannot obtain many details. It was in the hope of supplying a little information on this subject, that the author was tempted to add the foregoing chapter, as an after-thought, when his book was written. He is fully aware of its shortcomings and 'sketchiness,' but thinks most of the main points have been mentioned, and that it will prove a source of guidance to the busy family practitioner, who has not had the time or opportunity of spending a short part of his career at sea, and yet is almost daily liable to be consulted on this subject.



## APPENDIX I

### UNIFORM AND OUTFIT

COMPILED for a voyage to Australia viâ Suez Canal, lasting six weeks. Approximate cost of external uniform, wherever obtained, is given as a rough guide.

#### UNIFORM.

Blue cloth frock - coat suit, £4 4s.	6 white drill suits, at 15s. to 25s.
Blue cloth mess-jacket and vest, £3 3s.	2 white mess-jackets, at 15s.
Blue cloth serge undress suit, £3 3s. to £4 4s.	2 white mess-vests, at 10s. 6d.
2 uniform caps with band, badge, and two white cap- covers, 14s. 6d. each.	1 pair black boots, without toe- caps, at 14s. 6d.
Regulation overcoat, £4 4s.	2 pairs white deck shoes or boots, leather soled, at 5s. 6d.
	Solar topee (if uniform).
	2 pairs shoulder-straps, at 6s. 6d.

The above items are a minimum amount requisite for service in a mail-boat. A little may be saved by not ordering uniform waistcoats, and making one pair of trousers do for frock coat and mess uniforms. If this is done, the trousers should not have side-pockets. Prices given to include buttons and lace. Buttons should be fixed on with clips, not sewn, as they can subsequently be exchanged for mufti by the owner without

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depending upon the assistance of a member of the gentler sex.

### UNDERWEAR, ETC.

1½ dozen stiff-fronted white shirts.	4 pairs knitted bathing-drawers, for wear with white suits.
1½ dozen soft-fronted white shirts with cuffs.	3 black silk ties. 1 evening tie.
3 dozen collars (1 dozen or all single). Double collars optional, but not uniform for frock- and mess-coats.	4 dozen handkerchiefs.
6 pairs pants.	Flannel trousers.
9 vests.	Tennis shirts.
12 pairs socks.	1 pair rubbet-soled cricket shoes.
9 pyjama suits.	1 pair evening shoes.
	Black silk cummerbund to tie, for wear with white mess-jacket instead of vest.
	Usual suits of mufti, etc.

In the very hot weather it is comfortable and permissible, though not uniform, to wear a soft-fronted shirt and double collar with white mess jackets. The initial outlay will depend upon how much additional underwear has to be purchased. External uniform amounts to about £20 wherever ordered.

Small linen holders, for shaving and tooth brushes, razors, comb, etc., to fix up on the bulkhead, are very convenient; they should be made of washing material.

A fitted leather roll 'housewife' is useful for small repairs, making the owner independent of a stewardess.

White gloves are not usually worn at dances on board ship, so need not be provided.

## APPENDIX II

### BOARD OF TRADE SCALE OF DRUGS, ETC., FOR ONE HUNDRED PASSENGERS ON A VOYAGE UNDER ONE HUNDRED DAYS

#### DRUGS.

	lb. oz. dr.		lb. oz. dr.
Acidum boricum (in powder) ...	o 3 o	Glycerinum ...	o 8 o
„ carbolicum liquefactum ...	o 4 o	„ acidi tannici ...	o 2 o
„ citricum ...	o 1 o	Hydrargyri subchloridum ...	o o 2
„ hydrocyanicum dilutum ...	o o 2	Hydrargyrum cum creta ...	o o 4
„ nitrohydrochloricum dilutum ...	o 4 o	Iodoformum ...	o 1 o
„ sulphuricum dilutum ...	o 4 o	Linum contusum ...	6 o o
Æther ...	o 6 o	Linimentum belladonnæ ...	o 8 o
Alumen ...	o 2 o	„ camphoræ ammoniatum ...	o 6 o
Ammonii bromidum ...	o 4 o	„ opii ...	o 4 o
„ carbonatis ...	o 3 o	„ saponis ...	o 12 o
Argenti nitratis induratus ...	o o 2	Liquor ammoniæ acetatis ...	o 8 o
Bismuthi carbonatis ...	o 2 o	„ arsenicalis ...	o o 4
Borax ...	o 2 o	„ atropinæ sulphatis ...	o o 2
Calcii hydras ...	o 1 o	„ calcis ...	o 8 o
Camphor ...	o 3 o	„ epispasticus ...	o 1 o
Chloroformum ...	o 6 o	„ ferri perchloridi fortior ...	o o 4
Collodium flexile ...	o o 4	„ hydrargyri perchloridi ...	o 6 o
Copaibæ ...	o 4 o	„ iodi fortis ...	o 1 o
Extractum cascaræ sagradæ liquidum ...	o 2 o	„ morphinæ hydrochloridi ...	o 1 o
„ ergotæ liquidum ...	o 2 o	„ plumbi subacetatis ...	o 2 o
„ hamamelidis liquidum ...	o 1 o	„ strychninæ hydrochloridi ...	o 2 o
Ferri et ammonii citratis ...	o 1 o	Magnesii sulphas ...	3 o o
Ferri et quininæ citratis ...	o 1 o	Mistura sennæ comp. ...	5 o o



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	lb.	oz.	dr.		lb.	oz.	dr.
Oleum crotonis ...	0	0	1	Spiritus chloroformi...	0	3	0
„ lini ...	1	0	0	„ menthæ piperitæ	0	1	0
„ olivæ ...	0	8	0	„ rectificatus ...	0	6	0
„ ricini ...	1	0	0	Sulphonal (in powder)	0	0	4
„ terebinthinæ ...	0	6	0	Syrupus chloral ...	0	5	0
Parafinum molle ...	0	12	0	Tabellæ trinitrini ..	0	1	0
Phenacetinum ...	0	0	4	Tinctura arnicæ ...	0	1	0
Pilula colocynthidis				„ belladonnæ ...	0	1	0
comp. (gr. iv.),				„ benzoini comp. ...	0	2	0
4 dozen				„ camphoræ comp.	0	4	0
„ hydrargyri (gr.				„ cardamomi comp.	0	6	0
iv.), 3 dozen				„ catechu ...	0	1	0
„ plumbi c. opio				„ chloroformi et			
(gr. ii.), 1 dozen				m o r p h i n æ			
„ rhei comp. (gr.				comp. ...	0	1	0
iv.), 4 dozen				„ digitalis ...	0	1	0
„ saponis comp.				„ ferri perchloridi...	0	2	0
(gr. ii.), 3 dozen				„ gentianæ comp. ...	0	6	0
„ scillæ comp.				„ hyoscyami ...	0	2	0
(gr. iv.), 3 dozen				„ opii ...	0	4	0
Potassii bicarbonatis	0	4	0	„ scillæ ...	0	2	0
„ chloras ...	0	4	0	„ senegæ ...	0	4	0
„ iodidum ...	0	4	0	„ zingiberis ..	0	2	0
„ nitras ...	0	1	0	Vinum antimoniale ...	0	1	0
„ permanganas ...	0	4	0	„ colchici ...	0	1	0
Pulvis cretæ aromati-				„ ipecacuanhæ ...	0	4	0
cus ...	0	2	0	Zinci oxidum...	0	4	0
„ glycyrrhizæ comp.	0	4	0	„ sulphas ...	0	1	0
„ ipecacuanhæ ...	0	1	0				
„ i p e c a c u a n h æ				One hypodermic injection case :			
comp. ...	0	1	0	syringe, nickel-plated needles,			
„ jalapæ comp. ...	0	1	0	and tablets or discs of—			
Quininæ sulphas ...	0	2	0	Tartrate of morphine (gr. $\frac{1}{4}$ ),			
Sodii bicarbonatis ...	0	6	0	2 dozen.			
„ salicylas ...	0	3	0	Sulphate of atropine (gr. $\frac{1}{100}$ ),			
Spiritus ætheris ni-				1 dozen.			
trosi ...	0	8	0	Hydrochloride of cocain (gr. $\frac{1}{4}$ ),			
„ ammoniæ aromati-				2 dozen.			
cus ...	0	6	0	Apomorphine (gr. $\frac{1}{20}$ ), 1 tube.			

## DISINFECTANTS.

Carbolic acid powder, or other disinfectant powder of approved quality, 1 cwt.	Sulphur for fumigation, 5 lb.
Commercial carbolic acid, or other disinfectant of approved quality, 5 gals.	Tablets of perchloride of mercury to make a quart of 1 in 1,000 solution, 100.

## SUNDRIES.

Lint, 8 oz.	Plaster of Paris for bandages, 1 lb.
Boracic lint, 8 oz.	Set of Cline splints, 1.
Absorbent cotton-wool, 1 lb.	MacIntyre splint, 1.
Strapping (rubber plaster), 3 yds.	Cardboard or perforated felt for splints, 6 sq. ft.
Tow, 2 lb.	Minim measures, 2.
Sponges, aseptically prepared in hermetically-sealed bottles, containing 1 dozen, 3 dozen.	Ounce measure, 1.
Bed pans, 6.	Three-ounce measures, 2.
Leg and arm bandages, 2 dozen.	Stomach tube with funnel, 1.
Flannel bandages.	Higginson's enema syringes, 2.
Triangular bandages.	Glass or pewter half-ounce syringes, 6.
Calico for bandages, 3 yds.	One box of small scales and weights.
Flannel for bandages, 3 yds.	Iron basin (enamelled white) for lotions, 1.
Gamgee tissue, $\frac{1}{2}$ lb.	Wedgwood mortar and pestle, 1.
Double cyanide gauze, 2 yds.	Enamelled iron septic dressing- tray (triangular shape), 1.
Oiled silk, or substitute pre- pared by Christy and Co., 1 yd.	Wedgwood funnels, 2.
Waterproof sheeting, 4 yds.	Spatulas, 2.
Trusses: double 36 in., 1.	Bottles for medicine:
reversible, 30 in., 1.	2 oz., 2 dozen.
„ 36 in., 1.	8 oz., 4 dozen.
Safety pins, 5 dozen.	Fluted bottles.
Mustard leaves, 2 tins.	

## APPENDIX III

### OFFICIAL LIST OF SURGICAL INSTRUMENTS AND APPLIANCES

#### AMPUTATION CASE.

1 Fergusson's small saw.	1 aneurism needle.
1 amputation saw.	1 set tracheotomy instruments.
2 amputation knives.	3 double tubes and trachea dilator.
1 large dissecting forceps.	1 Esmarch's tourniquet (plain) with hook.
1 pair bone forceps (bent).	1 œsophageal probang with bristle.
2 pairs Wells' pressure forceps.	2 clinical thermometers (self-registering).
1 trephine (1 $\frac{3}{4}$ in. size).	1 stethoscope.
1 elevator.	1 ft. drainage tubing (No. 10 gauge).
1 trephine brush.	1 length silkworm gut ligature.
1 eye spud.	
2 scalpels.	
1 hernia knife.	
1 hernia director.	
2 trocars and cannulas.	

#### POCKET CASE.

1 artery forceps.	1 silver director.
1 dressing forceps.	1 caustic case.
1 finger knife.	1 scissors.
1 curved bistoury (sharp-pointed).	1 spatula.
1 curved bistoury (blunt-pointed).	2 lancets.
2 probes.	1 gum lancet.
	12 needles in vaseline.*
	1 tablet of silk (four sizes).

#### LEATHER MIDWIFERY ROLL.

Blunt hook.	Simpson's long midwifery forceps.
Craniotomy forceps.	
Perforator.	

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\* An objectionable method of keeping needles. When wanted, a lot of time is taken up cleaning them and clearing the 'eye' of vaseline. They should be kept dry or in rectified spirit.



## LEATHER TOOTH ROLL.

Upper molar (right).  
" " (left).  
" bicuspid.  
" incisors.

Lower hawksbill bicuspid.  
" molar.  
Hawksbill stump.

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1 case containing silver catheters (Nos. 4, 8, 12).  
1 full set olive-headed catheters (1-12).  
1 urinary test case, containing urinometer, lamp, litmus, twelve test-tubes, nitric acid, and liquor potassæ.

1 hypodermic injection case, with syringe, nickel-plated needles, and discs.  
1 aspirator, with two needles and bottle.  
1 ether inhaler, with bottle.

## APPENDIX IV

### LIST OF MEDICAL STORES NOT REQUIRED BY BOARD OF TRADE SCALE, AND WHICH IT IS USEFUL TO HAVE ON BOARD

#### DRUGS, ETC.

Tincture of aconite.	Emplastrum belladonnæ.
„ of cinchona.	Seidlitz powders, or citrate of magnesia.
„ of nux vomica.	Urotropine and Salol.
„ of orange.	Sodium sulphate.
„ of rhubarb.	Calomel (gr. $\frac{1}{8}$ tabloid, B.-W. and Co.).
Santonin.	Anti-diphtheritic serum (B.-W. and Co. or Parke Davis), with syringe.
Extract of male fern.	Fehling solution (tabloids).
Paraldehyde.	Horlick's malted milk.
Potassium bromide.	Eserine } B.-W. tab-
„ citrate.	Pilocarpine nitrate } loids.
„ chlorate (gr. v. tab- loids).	Amyl nitrite.
Oxymel of squill.	
Dilute phosphoric acid.	
Fuller's earth.	

#### APPLIANCES.

Small portable steam sterilizer and supply of methylated spirits.	Small pedestal chemical scale to be screwed down on bench.
Bronchitis inhaler	Formalin lamp for fumigating and supply of solution or tabloids.
Ham splints, 2.	Leslie's adhesive tape, $\frac{1}{2}$ and 1 in.
Wafer cachets (Morstadt) grs. v.	Doulton ware hot-water bottles, 2
Aural syringe and specula.	Invalid feeding-cups, 2.
Head mirror and set of laryn- geal mirrors.	Ligatures, sutures in sealed tubes.
Finger bandages.	
Martin's elastic bandage, $2\frac{3}{4}$ in.	
Printed labels, assorted.	

## APPENDIX V

### EMERGENCY APPLIANCES

THIS supplementary chapter has been placed in the Appendix as a ready means of finding it when required. It has been written as a result of past experience, with a view to saving the reader time and trouble, should any similar incidents occur in his practice. The items are given at random, as they were called to mind, without any attempt at sequence.

**Feed Cups for Invalids** can readily be improvised out of the afternoon tea-pots usually found in the pantry, their only objection being the weight, which is considerably greater than the proper article, and the handle situated wrong way round.

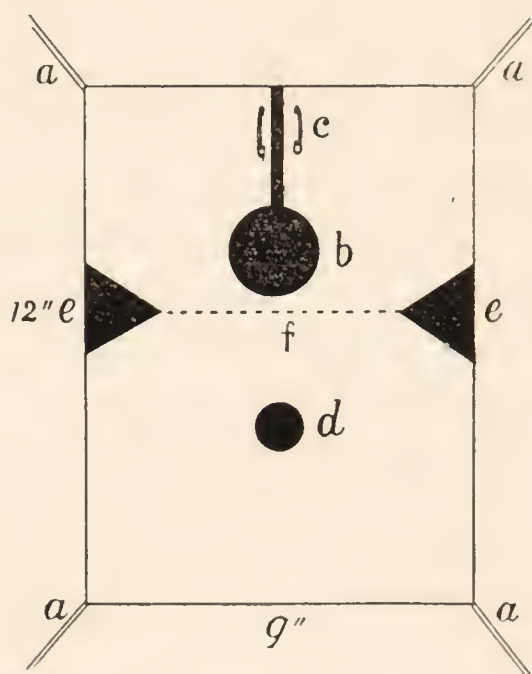
**Ice-bag.**—This is best obtained by using an ordinary plain indiarubber sponge-bag, suspended by the draw-strings. Before use its watertight capacities should be tested. A regular ice-bag is really superfluous, as the demand for it is not great, and, as previously mentioned, rubber perishes very quickly at sea unless in constant use.

**Aural Syringe and Insufflator.**—By fixing the barrel of an ordinary  $\frac{1}{2}$ -ounce glass urethral syringe to the nozzle of a clean unused Higginson's enema syringe, an effective aural syringe or powder insufflator is obtained, the drawback being that both hands are required to manipulate it successfully as an aural



syringe, and the patient must be directed to draw his auricle forwards and upwards in the usual way.

**Scrotal Sling.**—A capital scrotal sling is made as follows : To the four corners of a piece of lint, 9 inches by 12 inches, strips of bandage or tapes are fixed. The lint is then cut out, as shown in diagram. It is applied by letting it hang vertically, narrow side uppermost,



SCROTAL SLING.

*a*, Tapes or bandages; *b*, space for root of penis and scrotum; *c*, cut edge and safety-pin; *d*, hole for penis; *e*, V-shaped pieces, which can be taken in to fit the parts more closely; *f*, line of folding. (Shaded parts represent the pieces cut away.)

from the front of the abdomen and behind the scrotum, which is passed through the slit in the lint. The cut edges are next brought together by a safety-pin, and upper tapes taken over the anterior iliac spine and fastened behind. Necessary dressings or wool having been applied, the free end of the lint is turned upwards, enveloping the whole parts and tied behind. When in position, another hole for the penis must be made if

required. In this way a clean, effective, and cheap scrotal sling is obtained.

To insure closer fit, V-shaped pieces can be taken out of the two long borders and also held together by safety-pins.

**Splints.**—The lid of a cigar-box cut down and padded makes good finger-splints. For other parts, a removable plaster of Paris splint is the best and easiest to re-apply after massage, when once properly made. The best form of plaster splint is the Bavarian, which is made as follows : Two pieces of flannel, or, better, broadcloth or serge, are cut to fit the part, with about an inch to spare. They are then closely stitched together down the centre. The limb, having been well cleansed, shaved if necessary, and oiled, should be lightly and evenly enclosed in a flannel spiral bandage without turns or creases. It is then placed on the shaped flannel, and the inner sides sewn together to fit the limb closely everywhere, the superfluous flannel being cut away. The inner flap should be a little larger than the outer. Plaster cream is next poured in between the two outer and inner layers, and evenly distributed. The outer layers are then brought into apposition with the inner, trimmed off, and the whole firmly bandaged, and allowed to set. On the following day, or when required, the bandage is removed and stitches holding the inner layers together divided. The splint will then easily fall apart with a hinge at the back. Massage can be performed and the splint reapplied in a very short time. For compound fractures, a window must be made over the lesion, but as it requires considerable neatness and skill to make, the old-fashioned method of wooden splints is preferable, unless, of course, it is intended to treat the case by the aseptic closed method.

The making of the plaster emulsion requires some care, and is best done by sifting the dry powder into water, which is being stirred and kept stirred all the time until the proper density is obtained. The time to apply it is when the mixture has a consistency resembling condensed milk. No unnecessary time must be wasted in putting it on, as it hardens rapidly. This splint requires practice to apply properly, and is not so easy to make as a description indicates. The result, however, when satisfactory, far surpasses any other form for rigidity and yet rapidity and ease of removal.

**Strait - Jacket.** — Occasionally mechanical restraint is required, and a strait-jacket is rarely found on board ship. A safe and good method of restraining a violent patient is to spread a strong bed-sheet on the deck, and, with assistance, roll him round and round, pinning the free margin with safety-pins. In this way the most violent man can be easily and safely restrained by means of a bed-sheet and a few safety-pins. Unskilled but willing assistants are often inclined to exert more force than is absolutely necessary, tiring themselves, and perhaps injuring the patient, certainly stimulating him to continued violence. Whenever a patient is violent, if dressed, always have the boots removed and clothing round neck loosened. Apply restraint in such a way as to obtain the maximum mechanical advantage by the minimum expenditure of power—that is, apply the power at the shoulders and elbows, pelvis, at the anterior iliac spines, and just above the knees. In this fashion, the surgeon and three assistants can control the most violent, for a considerable time, without danger to anybody. Restraint should only be applied on the first signs of commencing struggles, not otherwise. It is quite futile—in fact,



only serves to increase the patient's excitement—for two or three men to hang on to each foot and hand, and one to sit on his head, like a horse down in the street. When the patient becomes abusive, using foul and filthy language, he can readily be stopped. This is done by the surgeon placing the flat of his hand over the patient's mouth. The latter's first act will be to try and bite it. The palm should be gradually flexed, but kept applied to the mouth to entice him to open it further. When it is sufficiently open, the thumb and forefinger should be made to meet, driving the cheeks in before them. Thus, the man can breathe quite well, but cannot speak, for fear of biting his own cheeks. This can be modified when examining a child's mouth. Finger pressure on supra-orbital notch will often keep a drunken man quiet and tractable.

**Spare Sheets.**—It is a good plan to have a stock of condemned sheets which can be used and destroyed afterwards, otherwise a lot of good linen may have to be wasted. All companies have a stock of linen which has been rendered unfit for ordinary passenger purposes, and is cut up for dusters, lavatory use, etc. This serves excellently for a septic or dirty case, as there is no accommodation for sterilizing and washing sheets on board.

**Canvas Cot.**—In the event of having to land a severe case, it is useful to possess a canvas cot, in which the patient can be placed and securely laced in, the whole being put overside by means of a derrick and tackle, so as to avoid all jolting and jarring. If there is no cot on board, the chief officer should be asked to order the sail-maker to make one. A regulation navy type is the best pattern. Directions for this will be found in the ship-captain's medical guide.

**Stretcher.**—A simple canvas deck-chair, laid out flat, makes a very good emergency stretcher. In many cases it is even better than the proper article, being easier to handle on accommodation ladders, etc. As an additional safeguard for those carrying it, cross battens can be nailed on at both ends, so as to prevent fingers getting trapped.

# APPENDIX VI

## CERTIFICATES

### EMIGRATION

GOVERNMENT EMIGRATION OFFICE,

.....

....., 190...

I approve of ..... taking medical charge  
of the passenger ship ....., of ....., under the  
provisions of Section 303 of the Merchant Shipping Act, 1894.

.....

*Emigration Officer.*

It is desirable that surgeons in charge of emigrant ships should  
keep a record of any sickness that occurs on the voyage, whether  
among saloon passengers, emigrants, or crew, and should report  
the same to this office\* at the end of the voyage, making special  
mention of the following particulars :

Date of commencement of voyage.

Date of termination of voyage.

Date of the commencement of any infectious or contagious  
diseases, the number of cases, and the number of families affected.

Has the ship been disinfected ?

State the number of deaths and their causes.

Was the ventilation sufficient ? If not, state where it was  
defective.

Were any complaints made by the emigrants ? If so, state  
what complaints, and what steps were taken in each case.

---

\* The report should be addressed as follows :

O. H. M. S.

THE EMIGRATION OFFICER,

Board of Trade Offices,

.....

N.B.—The surgeon is particularly requested to fill up and  
return this report at the end of the voyage.



# FORM OF CERTIFICATE OF BIRTH.

BIRTH OF A CHILD AT SEA ON BOARD .....						
Date of Birth.	Name.	Sex.	Name and Surname of Father.	Name and Maiden Surname of Mother.	Rank or Profession of Father.	Signature of Master of Ship.

# FORM OF CERTIFICATE OF DEATH.

DEATH AT SEA ON BOARD .....						
Date of Death.	Name.	Sex.	Age.	Rank or Profession.	Cause of Death.	Signature of Master of Ship.

All large passenger carrying ships have their own Company's official forms of certificate. The above are Board of Trade forms.

## HEALTH CERTIFICATES.

In the absence of a company's official form, such as that of the Orient Steam Navigation Company, given as a specimen, or one of the port which is to be entered, the following will satisfy all requirements:

S.S.....  
                   at.....  
                                 ....., 190..

I hereby certify that there is no, nor has there been, any case of infectious, contagious disease, or death (other than those to be mentioned subsequently) since leaving .....; that the general health of all on board during the voyage has been good; and that no dead rats\* have been found. Further, that we have communicated with no vessel on the high seas.

Signed.....*Medical Officer.*

## HEALTH CERTIFICATE FORM.

## THE ORIENT ROYAL MAIL LINE.

The undersigned Commander and Surgeon of THE ORIENT ROYAL MAIL LINE S.S. .... arrived from 'terminal port' viâ 'last port of call,' do hereby certify that there is..... case of cholera, yellow fever, or any other contagious or infectious disease at present on board the vessel; that the general health is good; and that we have not communicated with any vessel since leaving 'last port of call'; that no deaths have occurred during the voyage, except those mentioned on the back hereof. There has been.....case of infectious disease—viz., ..... during the voyage, particulars of which are mentioned on the back hereof.

.....*Commander.*

.....*Surgeon.*

Dated at.....the.....day of.....190..

---

\* The allusion to rats is on account of plague restrictions, applicable to ships trading to plague-infected ports.

N.B.—The Yellow Jack must always be flown when entering port until pratique is granted. Neglect of this may mean unnecessary delay.

## NOTICE TO PASSENGERS.

Passengers are hereby informed that before obtaining pratique on arrival at ....., a muster, for medical inspection, of all on board will be enforced. They are therefore earnestly desired to render every facility to the boarding health officer, thus saving delay and unnecessary annoyance to all on board.



# APPENDIX VII

## A SHORT LIST OF STEAMSHIP LINES, WITH HEAD OFFICES, TRADE ROUTES, ETC., AND MISCELLANEOUS INFORMATION

*Except where stated the engagement terminates with the voyage.*

NAME.	HEAD OFFICE.	TRADE-ROUTE.	SALARY AND MISCELLANEOUS.
*Aberdeen White Star ...	Geo. Thompson and Co., 7, Billiter Square, London E.C.	London to Australia via South Africa	No permanent surgeon carried. Assisted passage outwards or homewards. No uniform required.
Aberdeen Line ...	J. T. Rennie and Co., 4, East India Avenue, London, E.C.	London to Natal and East Africa	£6 a month.
Allan Line ...	103, Leadenhall Street, London, E.C.	Glasgow and Liverpool to Canada.	
Anchor Line ...	18, Leadenhall Street, London, E.C.	(1) Glasgow and Liverpool to New York (2) Glasgow and Liverpool to Bombay via Suez	£10 a month.
Atlantic Transport ...	108, Fenchurch Avenue, London, E.C.	London to New York	£10 a month.
Bibby Line ...	Bibby Bros., 26, Chapel Street, Liverpool, and 10 and 11, Mincing Lane, London, E.C.	Liverpool to Rangoon via Suez and Colombo	£10 a month.

\* Assisted passages only.

NAME.	HEAD OFFICE.	TRADE-ROUTE.	SALARY AND MISCELLANEOUS.
British and African. Elder Dempster Imperial West India Mail, etc. British India Steam Navigation Company	Elder Dempster African House, 6, Water Street, Liverpool, and 4, St. Mary Axe, London, E.C. Gray, Daves and Co., 23, Great Winchester Street, London, E.C. 23, Leadenhall Street, London, E.C. Bullard King, 14, St. Mary Axe, London, E.C. —	(1) West Coast of Africa, etc. (2) Bristol to West Indies. London to Calcutta via Suez, Colombo London to Natal. London to Natal. Liverpool to South America (1) Liverpool to New York (2) Mediterranean ports to New York London to Australia via Cape (1) London to Australia via Cape. (2) Liverpool to South America. Liverpool to U.S.A.	£10 a month. £8 a month. No instruments provided. £8 a month, with bonus. Agreement for a term. Assisted passages.
Bucknall Bros. ... Natal Line ... Booth Line ... Cunard Steamship ...	8, Water Street, Liverpool		
*Federal Steam Navigation Company. Houlder Bros. ...	2, Fenchurch Avenue, London, E.C. 146, Leadenhall Street, London, E.C.		
Leyland Bros. ...	27, James Street, Liverpool, and 38, Leadenhall Street, London, E.C. Wm. Lund and Co., 3, East India Avenue, London, E.C.		
*Lund's Blue Anchor ...	138, Leadenhall Street, London, E.C.		Assisted passages.
New Zealand Shipping Company		London to New Zealand via Cape	£10 a month.

Ocean Steamship Company and China Mutual	J. Swire and Sons, 8, Billiter Square, London, E.C.	Liverpool and London to China and Japan via Suez Canal	£10 a month, with rise after term of service. No uniform. No passengers except on China coast. Cargo boats. £10 a month. All instruments provided.
Orient Royal Mail ...	F. Green and Co., 5 and 13, Fenchurch Avenue, London, E.C.	London to Australia via Suez Canal.	
Pacific Steam Navigation Company	31, James Street, Liverpool	Pleasure cruises.	
Peninsular and Oriental	122, Leadenhall Street, London, E.C.	Liverpool to South America (1) London to India (2) London to China and Japan (3) London to Australia (4) Coastal service in the East	£10 a month. All instruments provided. £10 a month. Agreement for one year. Instruments to be provided.
Royal Mail Steam Packet Co.	18, Moorgate Street, London, E.C.	(1) Southampton to South America (2) London to Australia via Suez Canal	£10 a month.
Shaw, Savill and Albion	34, Leadenhall Street, London, E.C.	London to New Zealand via Cape	£10 a month.
Union-Castle ...	Donald Currie and Co., 3, Fenchurch Street, London, E.C.	London and Southampton to South Africa	£10 to £15 a month. Agreement for a term. Uniform buttons, lace, etc., gratis.
White Star ...	Ismay Imrie, 30, James Street, Liverpool, and 34, Leadenhall Street, London, E.C.	(1) Liverpool to U.S.A. (2) Liverpool to Australia via Cape (3) London to New Zealand via Cape (4) Mediterranean ports to U.S.A.	£10 and upwards. Agreement for a term.

\* Assisted passages only.



## APPENDIX VIII

## AUTHOR'S FORM OF RECORDING CASES.

Name and Rank or Occupation.	Age.	Diagnosis.	Complications.	Result, with Date of Discharge.	No.
Date.	History and Notes.	Treatment.	Diet.		

A dozen temperature charts should be obtained if not officially supplied ; they save much time and trouble, and can be bought anywhere.

ABSTRACT OF CLAUSES IN THE MERCHANT  
SHIPPING ACT, APPLICABLE MORE ES-  
PECIALLY TO THE SURGEON OF AN EMI-  
GRANT SHIP.

PART II.

114.—1. An agreement with the crew shall be in a form approved by the Board of Trade, and shall be dated at the time of the first signature thereof, and shall be signed by the master before a seaman signs the same.

2. The agreement with the crew shall contain as terms thereof the following particulars :

(a) Either the nature, and, as far as practicable, the duration of the intended voyage or engagement, or the maximum period of the voyage or engagement, and the places or parts of the world, if any, to which the voyage or engagement is not to extend.

(b) The time at which each seaman is to be on board or to begin work.

(d) The capacity in which each seaman is to serve.

(e) The amount of wages which each seaman is to receive.

(g) Any regulations as to conduct on board, and as to fines, short allowance of provisions, or other lawful punishment for misconduct which have been approved by the Board of Trade as regulations proper to be adopted, and which the parties agree to adopt.

115.—1. The agreement shall (subject to the provisions of this Act as to substitutes) be signed by each seaman in the presence of a superintendent.

2. The superintendent shall cause the agreement to be read over and explained to each seaman, or other-

wise ascertain that each seaman understands the same before he signs it, and shall attest each signature.

5. The agreements may be made for a voyage, or if the voyages of the ship average less than six months in duration, may be made to extend over two or more voyages, and agreements so made to extend over two or more voyages are in this Act referred to as running agreements.

6. Running agreements shall not extend beyond the next following thirtieth day of June or thirty-first day of December, or the first arrival of the ship at her port of destination in the United Kingdom after that date, or the discharge of cargo consequent on that arrival.

**123.**—In any legal or other proceeding a seaman may bring forward evidence to prove the contents of any agreement with the crew or otherwise to support his case, without producing, or giving notice to produce, the agreement or any copy thereof.

**160.**—Where a seaman is, by reason of illness, incapable of performing his duty, and it is proved that the illness has been caused by his own wilful act or default, he shall not be entitled to wages for the time being during which he is, by reason of the illness, incapable of performing his duty.

(The Board of Trade are advised that venereal disease does not disentitle the seaman to wages due under this section.)

**188.**—1. The master of a British ship shall not discharge a seaman or apprentice to the sea-service abroad, or leave him behind abroad, ashore, or at sea, unless he previously obtains, endorsed on the agreement with the crew, the sanction, or, in the case of leaving behind, the certificate—



(a) At any place in a British possession of a superintendent . . . or the Chief Officer of Customs, and

(b) At any place elsewhere of the British Consular Officer . . . but nothing in this section shall require such sanction where the discharge is in the British possession where the seaman was shipped.

2. The certificate shall state in writing the fact and cause of the seaman being left behind, whether the cause be unfitness or inability to proceed to sea, desertion, or disappearance.

**209.—1.** Every foreign-going ship, having one hundred persons or upwards on board, shall carry on board as part of her complement some duly qualified medical practitioner, and if she does not, the owner . . . shall be liable to a fine not exceeding one hundred pounds.

**220.—**If a master, seaman, or apprentice belonging to a British ship by wilful breach of duty, or neglect of duty, or by reason of drunkenness—

(b) Refuses or omits to do any lawful act proper and requisite to be done by him for preserving the ship from immediate loss, destruction, or serious damage, or for preserving any person belonging to or on board the ship from immediate danger to life or limb, he shall in respect of each offence be guilty of a misdemeanour.

**239.—5.** Every entry in the official log-book shall be signed by the master and by the mate or some other of the crew, and also—

(a) If it is an entry of illness, injury, or death, shall be signed by the surgeon or medical practitioner on board (if any).

**300.**—1. The owner or charterer of every emigrant ship shall provide for the use of steerage passengers a supply of the following things—namely, medicines, medical comforts, instruments . . . with written directions for the use of such medical stores.

2. The medical stores shall, in the judgment of the emigration officer at the port of clearance, be good in quality and sufficient in quantity for the probable exigencies of the intended voyage, and shall be properly packed and placed under the charge of the medical practitioner, when there is one on board, to be used at his discretion.

4. An emigrant ship shall not clear outwards or proceed to sea unless a medical practitioner, appointed by the emigration officer at the port of clearance, has inspected the said medical stores and certified to the emigration officer that they are sufficient in quantity and quality. . . .

**303.**—1. Subject to any regulations made by Order in Council under this part of the Act, a duly authorized medical practitioner shall be carried on board an emigrant ship—

(a) Where the number of steerage passengers on board exceeds fifty, and also

(b) Where the number of persons on board (including cabin passengers, officers, and crew), exceeds three hundred.

**306.**—1. An emigrant ship shall not clear outwards or proceed to sea until—

(a) Either a medical practitioner, appointed by the emigration officer at the port of clearance, has inspected all the steerage passengers and crew about to proceed in the ship, and has certified to the emigration officer and

that officer is satisfied, that none of the steerage passengers or crew appear to be, by reason of any bodily or mental disease, unfit to proceed or likely to endanger the health or safety of the other persons about to proceed in the ship, or . . .

2. The inspection shall take place either on board the ship, or, in the discretion of the emigration officer, at such convenient place on shore before embarkation, as he appoints. . . .

**307.**—1. If the emigration officer is satisfied that any person on board or about to proceed in any emigrant ship is by reason of sickness unfit to proceed, or is for that or any other reason in a condition likely to endanger the health or safety of the other persons on board, the emigration officer shall prohibit the embarkation of that person, or if he is embarked, shall require him to be relanded; and if the emigration officer is satisfied . . .

3. If any person embarks when so prohibited to embark, or fails without reasonable cause to leave the ship when so required to be relanded, that person may be summarily removed, and shall be liable to a fine not exceeding forty shillings for each day during which he remains on board.

4. Upon such relanding the master of the ship shall pay to each steerage passenger so relanded, or, if he is lodged and maintained in any hulk or . . . under superintendence of the Board of Trade . . . subsistence money at the rate of one shilling and sixpence a day . . . until he has been re-embarked, or declines, or neglects to proceed, or until his passage-money, if recoverable under this part of this Act, has been returned to him.



**308.**—When a person has been relanded from an emigrant ship on account of his sickness or that of any members of his family, and is not re-embarked, or does not finally sail in that ship, he . . . shall be entitled on delivery up of his contract ticket . . . to recover summarily, in the case of a steerage passenger the whole, and in the case of a cabin passenger one half of the money paid. . . .

**325.**—1. In every emigrant ship the medical practitioner, aided by the master, or, in the absence of the medical practitioner, the master, shall exact obedience to all regulations made by any such Order in Council as aforesaid.

2. If any person on board—

(a) Fails, without reasonable cause, to obey, or offends against any such regulation, or any provision of this part of this Act ; or

(b) Obstructs the master or medical practitioner in the execution of any duty imposed upon him by any such regulation ; or

(c) Is guilty of riotous or insubordinate conduct, that person shall for each offence be liable to a fine not exceeding two pounds, and in addition, to imprisonment for any period not exceeding one month.

**330.**—If a steerage passenger is landed from any ship, whether an emigrant ship or not, at any port other than the port at which he has contracted to land, unless with his previous consent, or unless landing is rendered necessary by perils of the sea or other unavoidable accident, the master of the ship shall be liable . . . to a fine not exceeding fifty pounds.

## SCHEDULE.

XI.—10. Sufficient space shall be set apart in every emigrant ship for use exclusively as a hospital for the steerage passengers, properly divided off, to the satisfaction of the emigration officer at the port of clearance.

11. The space set apart for a hospital shall be under the poop or in the round-house, or in any deck-house which shall be properly built and secured to the satisfaction of the emigration officer at the port of clearance, or on the upper passenger deck, and not elsewhere.

12. The space so set apart shall contain not less than eighteen clear superficial feet for every fifty steerage passengers whom the ship carries, and shall be fitted with bed-places, and supplied with proper beds, bedding, and utensils, to the satisfaction of the emigration officer at the port of clearance, and shall throughout the voyage be kept so fitted and supplied.

XII.—When the ship is not in the tropics it shall not be obligatory to issue lime-juice, but lime-juice may be issued at the discretion of the medical practitioner on board, or if there is no such medical practitioner, at the discretion of the master.

The foregoing abstract of the Merchant Shipping Acts contains practically everything which applies to the surgeon in his dual rôle, and a few brief explanatory notes are here given upon the working of the Acts.

From the standpoint of a 'seaman,' Sections 114 (1, 2A, 2G), 115 (1, 2, 5, and 6) are very important, in order that a medical man wishing to spend but a short time at sea may not find himself still bound to the ship at the expiration of that time. Except in the case of mail-boats running to scheduled time, and conse-

quently to be relied on to return on or about a certain date, before signing articles the surgeon should satisfy himself by careful perusal of the clauses coming under Sections 114 (2A), 115 (1, 5, 6) that he will not be liable for longer service than he intends. The finding of a substitute in foreign ports is generally a matter of difficulty and expense. A seaman is quite within his rights in demanding to see the articles prior to signing them. As previously mentioned, they are generally gabbled over quickly, in such a way as to be quite unintelligible, even to the most attentive auditor. Should he not agree to any clause, he may decline to sign until it be altered or erased, or some special undertaking given that it shall not apply.\*

Incidentally it may be stated that the surgeon, as a seaman, 'signs the articles' in agreement with the master of the ship, and not the owners thereof. Unless there be another separate agreement with the owners for a period of service, the surgeon's service ends with the voyage, when he is free to leave or make a second one. In all official letters of appointment from the head office will be found the following significant sentence: 'This appointment continues during our pleasure.' Except in cases of misconduct, the appointment, as a rule, continues as long as the surgeon is desirous of sticking to the ship, but he is, nevertheless, liable to be dismissed at the conclusion of any voyage, without a reason being given, further than official notice of dismissal from the company's office.

\* *Vide* Peninsular and Oriental Steam Navigation Company v. Paterson. Sea-going practitioners owe to this professional colleague a debt which they can hardly repay for the successful way in which he defended his interests and those of the profession. Full reports of the case will be found in the *Lancet* of December 13, 1902, p. 1642, and January 10, 1903, p. 118.



The custom of allowing pay, while the ship is in England between voyages, varies. Most companies grant it, although the surgeon is not legally entitled to it, unless standing by the ship in dock.

As a seaman, he cannot be left behind or put on shore in foreign ports unless he is a consenting party, or his landing is agreed to by certain persons (Section 188), an indictable offence being dealt with on the ship's return to home port, unless disciplinary measures are taken under Section 188. When a surgeon wishes to leave in a foreign port, and the master is agreeable, the discharge is given by 'mutual consent,' and articles endorsed accordingly.

The 'medical sections' of the Act applicable to him as surgeon are quite concise and plain, requiring little comment.

Section 325 (1, 2) should always be borne in mind in the event of any difficulty occurring. Steerage passengers, under stress of competition by the various lines carrying them, are nowadays catered for almost luxuriantly, having stewards to wait on them, and do all the necessary work. Occasionally they are inclined to forget, or fail to realize fully, the legal status under which they are travelling, and that they are emigrants pure and simple, and as such come within the scope of the emigration clauses of the Merchant Shipping Act. A gentle reminder of this fact by the surgeon will generally bring about any desired result; failing this, any malcontent or offender should be brought up before the commander. The foibles of human nature are just as real and apparent in the 'steerage' as in the 'saloon,' only amongst this class they should not be encouraged, or certainly not endured, for the sake of the peace of the community. This class of passenger, through the

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unusual and enforced idleness on board, is apt to be more fractious than his saloon confrère. It is another instance of setting a beggar on horseback.

With regard to hospitals on emigrant ships, it must be distinctly borne in mind that they are provided for the use of steerage passengers only; members of the crew ought not to be placed in them for treatment, legally speaking. Very few ships indeed have hospital cabins for the use of the crew, and as, among a large crew, there are certain cases bound to arise which cannot be adequately treated in their own quarters, such a cabin should be compulsory by law, on all ships carrying a crew of over fifty. This is an age of progress, which can readily be realized by reading the regulations for emigrants as drawn up some twenty or more years ago and still in force, and comparing them with the accommodation, etc., provided by the first class emigrant-carrying ship of to-day. Their medical department has kept pace with the times, although there is still much to be desired in the way of hospital accommodation, especially with regard to its situation. The majority of them, owing to the regulation of their being situated under the poop or round-house—dating back to old sailing-ship days—are in most cases placed in the busiest and noisiest part of the ship, with people tramping about overhead and talking and skylarking outside. Rest and quiet are unobtainable.

Complete tabloid drug equipment is not altogether to be desired, checking, as it does, individuality of prescribing, although some might advantageously be carried, particularly 'compound preparations.'

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